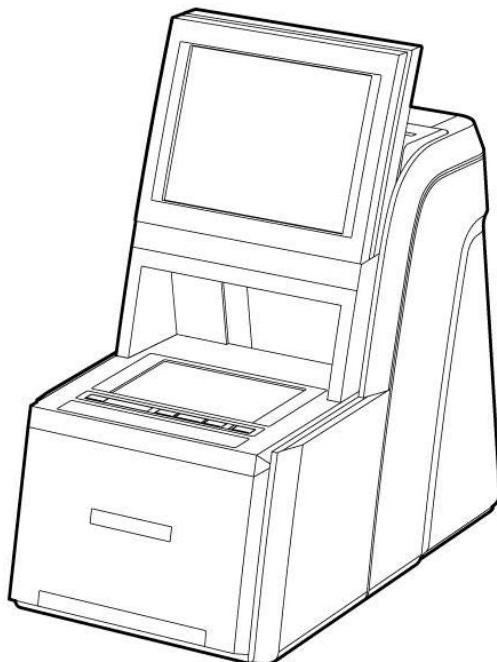


# User Manual

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Autoblocker  
**HAB-8000**



***Huvitz***

## **IMPORTANT NOTICE**

This product may malfunction due to electromagnetic waves caused by portable personal telephone, transceivers, radio-controlled toys, etc. Be sure to avoid having the above objects, which affect the normal operation of the product, brought near the product.

The information in this publication has been carefully checked and is believed to be entirely accurate at the time of publication. HUVITZ assumes no responsibility, however, for possible errors or omissions, or for any consequences resulting from the use of the information contained herein.

HUVITZ reserves the right to make changes in its products or product specifications at any time and without prior notice, and is not required to update this documentation to reflect such changes.

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Ver 1.0 (Jun. 2013)

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## 1. Introduction

This product is Auto Blocker HAB-8000, lenses can be analyzed and blocked automatically with this machine. So the HAB-8000 eliminates the need for manual inspection or manual blocking of the lens. Also, HAB-8000 is able to read the frame with simple steps.

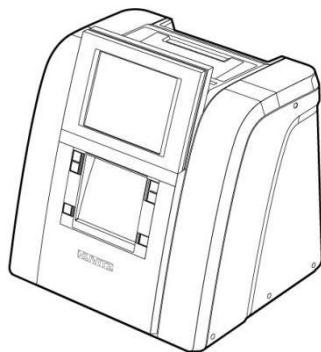
### 1.1. Main Features

- This product can block all kinds of lenses that include the normal lens without 3 dot, the bi-focal lens, the progressive lens and the lens with 3 dot.
- 10.4" TFT-LCD True color display device and touch screen are harmonized to offer the actual size (Frame, PD and FPD etc.) display and the maximum convenience for everyday use
- The Frame Reader Module reads the frame as well as the pattern, and then sends the data to main GUI display module.
- This product includes not only the image processing module but also the lensmeter module so that it can block from a normal lens without 3 dot to a progressive lens.
- User can design all information about layout and edging at one page, and send it to other two edger machines at a same time.
- Graphically Designed Test Mode enables the operator to effectively perform the routine maintenance without the technical assistance
- Any shape and material of a frame from rimless to goggles are automatically and precisely scanned with 3D technology that guarantees no margin of error.
- The Digital Scanning technology can scan a frame shape for a demo lens without a conventional tracer. This provides you an enormous convenience and a time saving.
- Frame data is saved in SD memory card permanently. Therefore, you can load them whenever you want.
- The complete harmony between this blocking machine and the edger machine will accomplish the full automation of edging processes.

## 1.2. System Configuration



Auto Blocker (HAB-8000)



Edger (HPE-8000)

## 1.3. Classification

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

- Class A equipment
- Class A equipment is intended to be used in an industrial environment. In this document for the user, a statement shall be included drawing attention to the fact that there may be potential difficulties in ensuring electromagnetic compatibility in other environments, due to conducted as well as radiated disturbances.
- Protection against electric shock: Class I(earthed)
- Measurement Category: CAT II
- Pollution Degree: 2

## 2. Safety Information

### 2.1. Introduction

Safety is everyone's responsibility. The safe use of this machine is largely dependent upon the installers, users, operators, and managers. It is prerequisite to read and understand these specifications before installing, using, cleaning, fixing or revising. Fully understanding the whole instructions must be the first priority. For this reason, the following safety notices have been placed appropriately within the text of this manual to highlight safety related information or information requiring special emphasis. All users, operators, and maintainers must be familiar with and pay particular attention to all signs of Warnings and Cautions.



#### WARNING

"Warning" indicates the presence of a hazard that could result in severe personal injury, death or substantial property damage if ignored.



#### CAUTION

"Caution" indicates the presence of a hazard that could result in minor injury, or property damaged if ignored.-

#### NOTE

This is used to emphasize essential information.

Be sure to read this information to avoid operating the device incorrectly.

## 2.2. Safety Symbols

The International Electrotechnical Commission (IEC) has established a set of symbols, which are listed below.

This applies only to the instrument that has the certification symbol printed explicitly on the product label or sticker.



I and O on power switch represent ON and OFF respectively.



This symbol identifies caution, risk of danger. Ensure you understand the function of this control before using it. Control function is described in the appropriate User's or Service Manual.



Protective Earth Connection

### Disposal of your old appliance



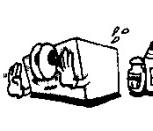
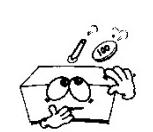
1. When this crossed-out wheeled bin symbol is attached to a product it means the product is covered by the European Directive 2002/96/EC.
2. All electrical and electronic products should be disposed of separately from the municipal waste stream via designated collection facilities appointed by the government or the local authorities.
3. The correct disposal of your old appliance will help prevent potential negative consequences for the environment and human health.
4. For more detailed information about disposal of your old appliance, please contact your city office, waste disposal service or the shop where you purchased the product.

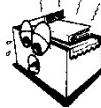


Alternating Current

### 2.3. Environmental Considerations

Avoid the following environments for operation or storage:

	Where the machine is exposed to water vapor. Don't operate the machine with wet hands
	Where the machine is exposed to direct sunlight.
	Where there are big changes in temperature. Optimal temperature range for normal operation is from 10°C to 40°C. (Humidity : 30 ~ 80%)
	Where there is a hot equipment nearby
	Where the humidity is extremely high or there is a ventilation problem.
	Where the machine is exposed to excessive shocks or vibrations.
	Where the machine is exposed to chemical material or explosive gas.
	Be cautious so that things like dust and metal do not fall inside the machine.

	Don't disassemble or open the product. HUVITZ does not take responsibility for the possible problems
	Be careful not to block the fan located on the backside of the machine.
	Don't plug the AC power cord into the outlet unless all parts of the machine are completely connected. Otherwise, it will cause severe damage on the machine.
	Pull out the power cord with holding the plug, not the cord. To avoid risk of electric shock, this equipment must only be connected to a supply mains with protective earth.

This instrument must be followed by these following conditions:

### 1. Operation

An ambient temperature range of 10°C ~ 40°C (50°F ~ 104°F)

A relative humidity range of 30% ~ 80%

An atmospheric pressure range of 800 ~ 1060hpa

### 2. Transportation

An ambient temperature range of -25°C ~ 70°C (-13°F ~ 158°F)

A relative humidity range of 10% ~ 95% (with non-condensing)

An atmospheric pressure range of 500 ~ 1060hpa

### 3. Storage

An ambient temperature range of -25°C ~ 70°C (-13°F ~ 158°F)

A relative humidity range of 10% ~ 95% (with non-condensing)

An atmospheric pressure range of 700 ~ 1060hpa

Please avoid where the equipment is exposed to excessive shocks or vibration.

**Operation time: max 6 min for short-term operation**

## 2.4. Safety Precautions

This machine has been developed and tested according to safety standards as well as national and international standards. This guarantees a very high degree of safety for this device. HUVITZ is legally required to inform the users of all the information regarding safety. Observance of the instructions is the requirement for the safety. Therefore, please read carefully all instructions before switching on this machine. For more detailed information, please contact our Customer Service Department or one of our local agencies

1. This equipment must not be used (a) in an area that is in danger of explosions and (b) in the presence of flammable, explosive, or volatile solvent such as alcohol, benzene or similar chemicals.
2. Do not place or store this machine in humid area. Humidity should be maintained between 30 and 80% for normal operation. Do not expose the device to water splashes, dripping water, or sprayed water. Do not place containers with fluids, liquids, or gases on top of this machine
3. The machine must be operated by a trained and qualified person or under his or her supervision
4. Repair of this machine must be conducted by HUVITZ's service technicians or other authorized persons.
5. Maintenance by users must observe the User's Manual and Service Manual. Any additional maintenance may only be performed by HUVITZ's service technicians or other authorized persons.
6. Manufacturers are responsible for the safety, reliability, and performance of this machine only when the following requirements are fulfilled: (1) When the machine has been installed in a proper area, following the manual. (2) When the machine has been operated and maintained according to the manual and service manual.
7. Manufacturers are not responsible for the damages caused by unauthorized alterations. Such tampering will forfeit any rights to receive services during the term of guarantee.
8. This machine must be connected with the accessories supplied by HUVITZ. If you are to use other accessories, their safety or usability must be checked and proved by their manufacturers or HUVITZ.
9. Only those who have undergone proper training and instructions are authorized to install, use, operate, and maintain this machine.
10. Keep the User's Manual and Service Manual in a place easily accessible at all times for persons operating and maintaining the equipment.
11. Do not apply excessive force to cable connections. If the cable does not connect easily, make sure that the connector (plug) is appropriate for the receptacle (socket). If you caused any damage to a

cable connector(s) or receptacle(s), let the damage(s) be repaired by an authorized service technician.

12. Please do not pull on any cable. Always grab the plug when disconnecting cables.
13. Before you use, check the exterior of the machine and its conditions
14. Do not block any ventilation outlet necessary for proper heat dissipation.
15. If smoke, sparks or any abnormal noise or smell is noticed coming from the machine, please switch the power off immediately and pull out the plug.
16. When you carry this product, please use a hand cart. At least three people are required to lift the machine. If you want to move the product to other area, please contact customer service center.
17. To avoid the risk of electric shock, , this machine must only be connected to protective earth
18. The machine may be impaired if it is used in a manner not specified by the manufacturers or manual.



## WARNING

- Do not put your hands into the machine while blocking. Otherwise, it may cause serious injury.
- Do not block without lens adaptor, otherwise the lens may be broken or scratched.
- Do not block when there is no lens on the lens supporter. Otherwise it may cause malfunction of the product.
- The machine should be properly installed and operated based on the instructions on this manual. If the power is turned on without removing fixing materials like several styrofoams, it may cause damage to the product and cause malfunction of the product.
- Do not disassemble the product without proper training. It may cause electric shock, serious injury during the operation or cause malfunction of the product.
- The product should be properly installed and maintained at where the ground is even and flat. Otherwise, it may affect the normal operation of the product.
- Be sure that the stylus of frame reader is not interfered with the human body or other objects during the operation. Otherwise, it may cause injury or malfunction of the product.
- Do not force on the stylus of frame reader. It may cause malfunction of the product.

**CAUTION**

- When moving the machine, first fix the stage and check whether the power supply is off. Then, two or more persons should lift the bottom of the product with both hands.
- When setting down the machine, make sure not to be interfered with the obstacles. Set down the product slowly in order to prevent any injury of human body or damage to the product.
- When moving the machine, make sure the locking device and the screw for the cover are properly tightened.
- When wrapping the machine, use recommended packaging and shock-absorbing materials in order to prevent damage during the transportation.
- Be sure to use the standard accessories or tools provided together with the product for the maintenance. Otherwise, it may cause the malfunction of the product.
- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE**

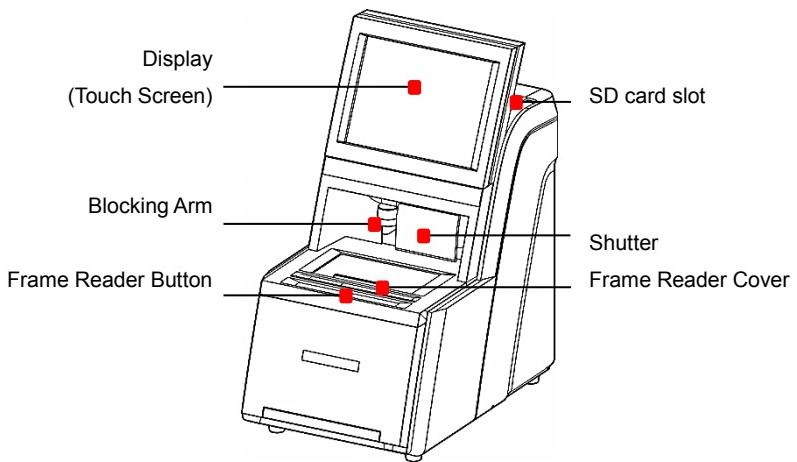
This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment.

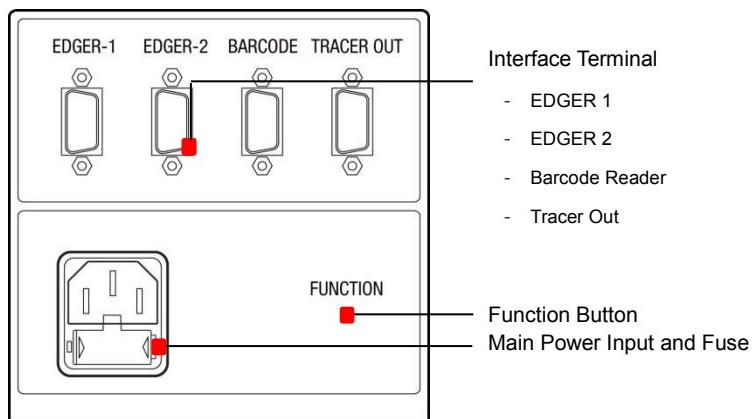
This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

### 3. Autoblocker (HAB-8000)

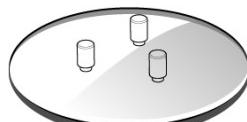
#### 3.1. Front View



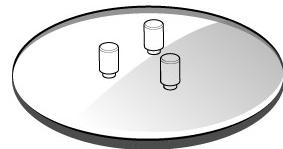
#### 3.2. Rear View



### 3.3. Standard Accessories (Tool Box)



Lens Supporter



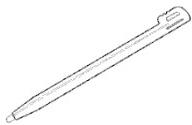
Lens Supporter for Frame Change



Lens Supporter for Digital Scanning



Pattern Holder



Touch Pen



Standard Pattern



Standard Frame

#### NOTE

- Only 3M LEAP-III™ is available for this product. Otherwise, the lens axis may move
- We do not provide a sticker for Super Hydrophobic Lens, but you should use qualified ones, or the lens axis may move

## 4. Installation

### 4.1. Installation Procedure

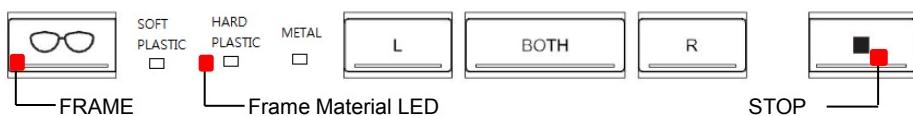
- ① Remove the shock-absorbing materials from the packing box and take out the auto blocker carefully.
- ② Remove the shock-absorbing materials from the blocking arm and the workspace of Stylus.
- ③ Plug the Power Cable into the socket at the rear side of the product and turn on the power to check the initial operation.
- ④ If the initial operation is successful, connect Edger and Auto blocker using 9-pin D-sub Crossed Interface Cable.

#### NOTE

Keep the shock-absorbing material in the tool box and use them again when you move the machine

## 5. Frame Reader

### 5.1. Frame Reader Button



#### **Material Selection - FRAME Button**

You must press FRAME button and select one of the following options (frame materials) before the frame is traced.

- METAL
- HARD PLASTIC (PLASTIC)
- SOFT PLASTIC (OPTYL)

The specified value is used in Edger for the size adjustment.

#### **Curve Selection - FRAME Button**

If the pattern or the demo lens is placed in the tracer, the FRAME button is automatically changed from material selection to curve selection.

- METAL – LO CURV (2D Tracing)
- HARD PLASTIC - HI CURV (3D Tracing)

With 'HI CURV' mode, the tilt correction will be conducted automatically. Therefore, select HI CURV mode for a lens with extreme curve.

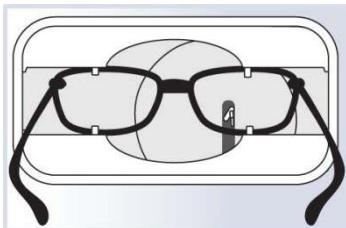
#### **L / BOTH / R Button - Tracing**

- BOTH Two eye tracing. This is only for frame tracing.
- R Right eye tracing.
- L Left eye tracing.

#### **STOP Button**

Stop tracing.

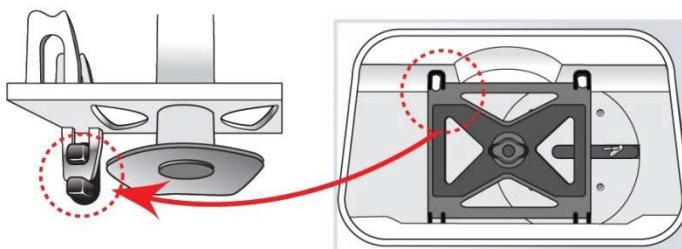
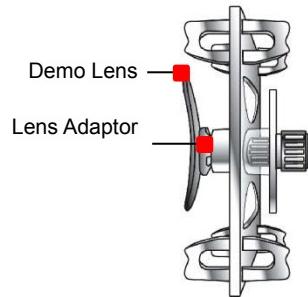
## 5.2. Frame Tracing



- ① Place the frame between the upper grippers and the lower grippers.
- ② Move the frame in order that the bridge of frame is located at the central position between the left and right side grippers.
- ③ Press the FRAME button to select the frame material.
- ④ Press the Reading Button (BOTH, R, L).

## 5.3. Pattern Tracing

- ① Make a marked spot on the optical center of the demo lens by using Lensmeter.
- ② Block the Lens Adaptor at the center of the marked spot by using Blocker.
- ③ Place it on the Pattern Holder.
- ④ Press the FRAME button and select the tracing mode (LO CURV, HI CURV).
- ⑤ Press the Reading Button (R, L).



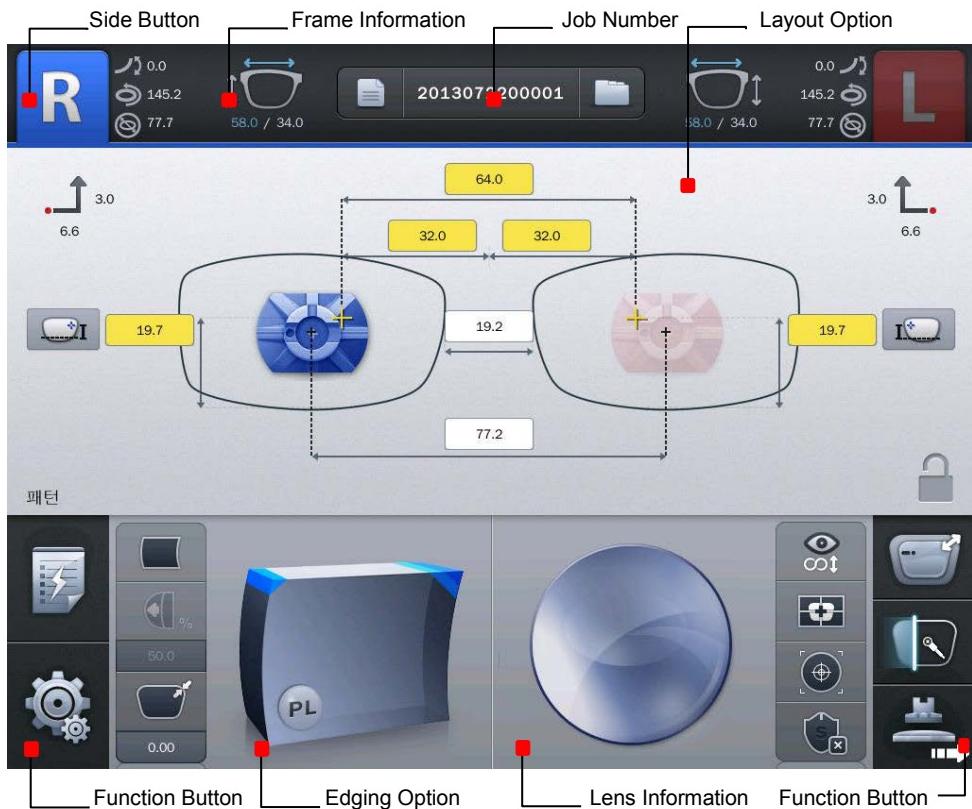
[How to place the Pattern Holder to Gripper]

**NOTE**

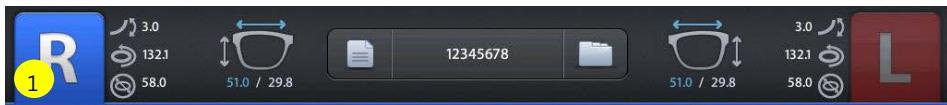
- The data will be automatically transmitted after finishing the tracing.
- When tracing the single side (R or L), the data for R or L will be symmetrically copied to the data of the other side automatically.
- When tracing pattern or demo lens, press the 'L' or 'R' button for more than 3 seconds to execute concave shape tracing mode.
- When tracing frame, press the 'L', 'BOTH' or 'R' button for more than 3 seconds to execute concave shape tracing mode. (if MENU >> ETC >> SEMI-AT option is set to YES, Semi-Automatic tracing mode will be executed instead of concave mode)
- Semi-Automatic tracing mode is useful for tracing the frame with the lopsided groove.
- In this manual, both "Tracer" and "Frame Reader" are used.

## 6. Auto Blocker User Interface

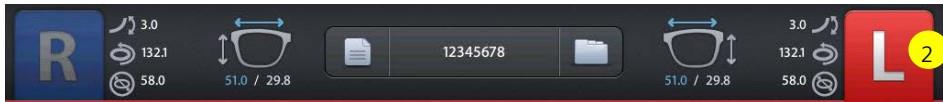
### 6.1. Main Screen



#### 6.1.1. Side Button



- ① Press the R button to select right side.



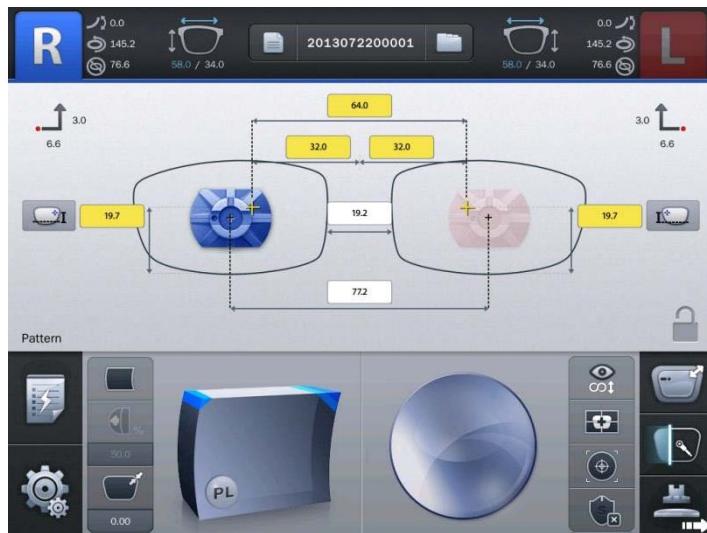
- ② Press the L button to select left side.

**NOTE**

- Each side of frame shape is exchanged by pressing the R button for a while.
- The function of exchange R/L is useful when you selected wrong side while reading demo lens or patterns.

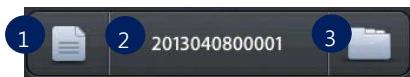


(Message pops up when press the R button for a while)



(Left and Right sides are exchanged. The other job options remain unchanged)

### 6.1.1. Job Management



### 6.1.2.

- ① New : Clear current job screen and wait new job.
- ② Job Number : Display current job number (Press the button to change job number)
- ③ Job Manager : Press the job manager button to load a new job or move on to another job

### NOTE

- Virtual Keyboard

Use the virtual keyboard to change Job number.



- ① Job number Value
- ② Backspace
- ③ Apply
- ④ Reset (Cancel) – If you press the button, the value goes back to original value. If you press the reset button one more time, the virtual keyboard disappears
- ⑤ Move cursor
- ⑥ Cancel (Close) – Close the virtual keyboard without saving changes.

### NOTE

- Following additional functions are available by pressing 'Job Management' button for a while.
- You can save current job on SD card by pressing 'Job Number' for a while.



- You can start jobs with edger or remote edging host pc by pressing 'Job Manager' button for a while.



- The function of job request works only when communication option on configuration menu is set properly.

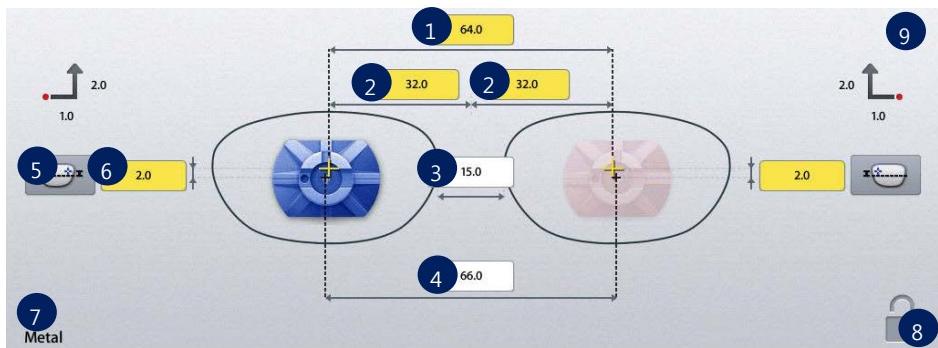
### 6.1.3. Frame Information



- ① Frame Curve
- ② Circumference
- ③ Minimum Lens Diameter
- ④ Width/Height

### 6.1.4.

### 6.1.5. Layout Option

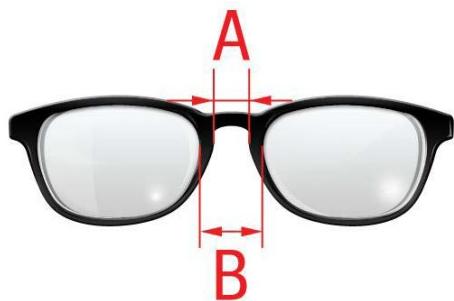


### 6.1.6.

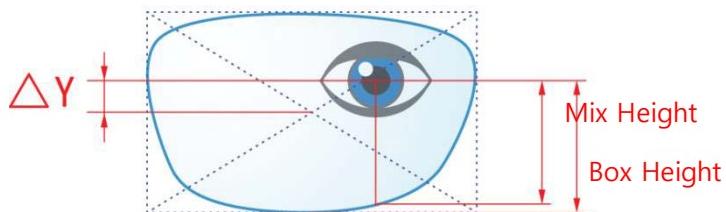
- ① Binocular PD: Input prescribed binocular PD value.
- ② Monocular PD : Input PD values for each side (L/R)
- ③ Bridge Size (DBL): Input value of bridge size.
- ④ FPD: Input value of FPD.
- ⑤ OH Type: Select one of three,  $\Delta Y$ , Box Height, Mix Height.
- ⑥ OH (Optical Height): Input OH value.
- ⑦ Frame Material : Display frame material
- ⑧ Touch Screen Lock On/Off
- ⑨ Blocking Offset: Display movement amount of the lens to perform Boxing center blocking with manual blocker.

**NOTE**

- When you input Binocular PD value, Monocular PD values for each side are automatically calculated and vice versa.
- When you input Bridge Size value, FPD value is automatically calculated and vice versa.
- In case of Two Eye Tracing, the value of FPD will be automatically transmitted and displayed.
- In case of pattern tracing, be sure to change the standard value to the actual Bridge Size.
- In case of One Eye tracing, it will be helpful to use Bridge Size Input function. (It is much easier to measure the Bridge Size)
- Measure B, not A, for the Bridge Size. Remember that the Bridge Size is not from frame to frame, but from lens to lens.



- OH value is recalculated when you change OH type.
- The exact meaning of the mix height and the box height is as following.



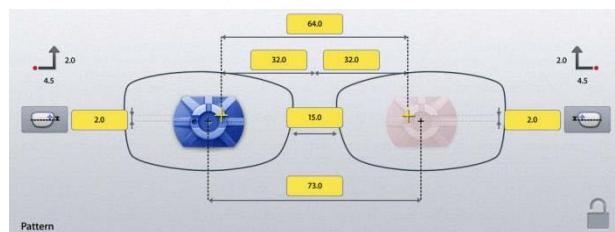
- It is important to measure the optical height of the patient precisely when edging a progressive lens. Sometimes, too short optical height might cut out the near vision area.

## NOTE

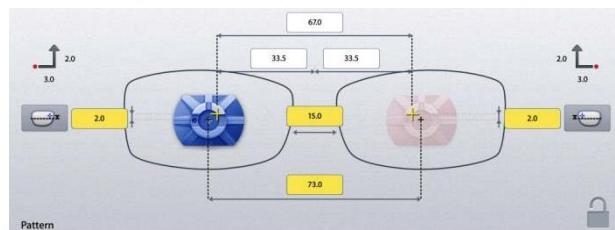
- Layout information, edging information and lens information can be modified in advance before or while tracing the frame information by frame reader or digital scan. The modified information will be applied to the new job from the frame reader or digital scan.



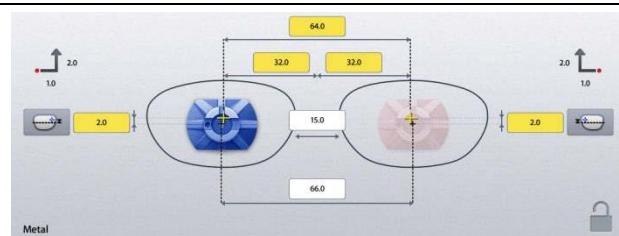
- In layout information, dialog PD, OH, Bridge Size, FPD are mandatory value. The color of input box of these values is changed when you input value.



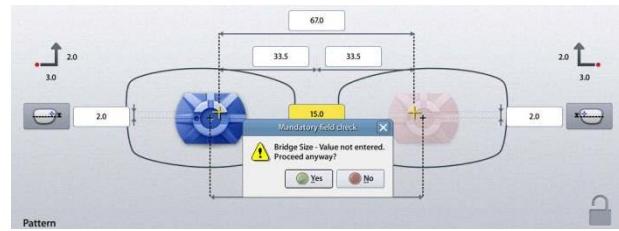
- Blanked box is colored yellow. It changes into white when you input value.



- If frame reader traces shape of frame for both side, FPD value is calculated automatically. Therefore, input boxes of bridge size and FPD are displayed white.



- Warning message pops up if you start edging with the blanked box remained.



- But, this warning message pops up only when the warning option is turned on in the Preferences menu.

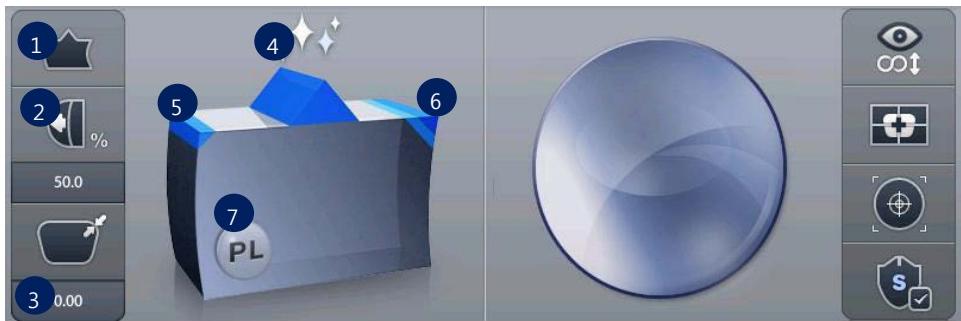
## NOTE

- Numeric Keypad  
Click the value you want to change then this numeric keypad will pop up.

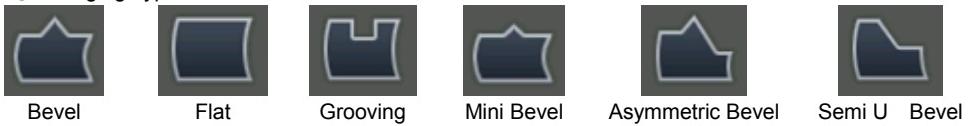


- ① Name of the value
- ② Range of the value
- ③ Value
- ④ Increase/Decrease
- ⑤ Backspace
- ⑥ Reset (Cancel) - If you press it, the value goes back to original value. If you press it one more time, the numeric keypad disappears.
- ⑦ Change Sign
- ⑧ Apply
- ⑨ Cancel – Close numeric keypad without saving the changes. Reset button is helpful when you are in trouble with small size of cancel button.

#### 6.1.7. Edging Option



① Edging Type



#### NOTE

- Available edging types can vary by wheel types of the edger.

Normal Type (RPG, RPW)



Asymmetric Type (RPA, RPWA)



**NOTE**

- You can input additional parameters according to the selected edging type.
- Grooving



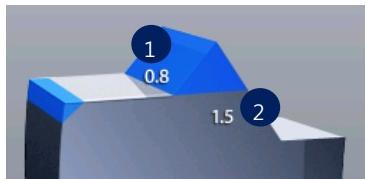
- ① Groove Depth
- ② Groove Width

- Mini Bevel



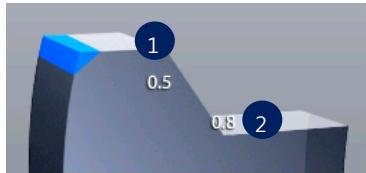
- ① Bevel Height

- Asymmetric Bevel



- ① Front Height
- ② Rear Height

- Semi U Bevel



- ① Tip Width
- ② Rear Height

## NOTE

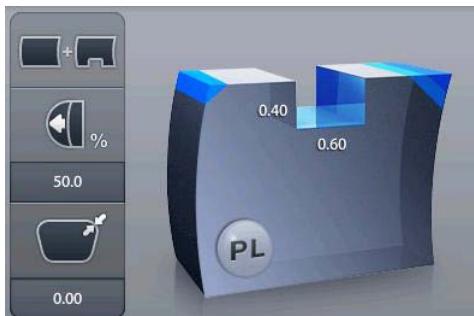
- After you've selected grooving as the edging type, you can select partial grooving by pressing 'Edging type' button for a while.
- There are three ways for support to partial grooving.



Grooving

Partial Grooving  
(Flat + Grooving)Hybrid Grooving  
(Bevel + Grooving)Partial Bevel  
(Bevel + Flat)

- Relevant icon is displayed at edging type when partial grooving is selected.



- To cancel the partial grooving mode, press the edging type button and change into another mode.
- Processing with partial grooving needs an editing step of partial grooving for set boundary position after feeling process.

① Bevel/Groove Position



Front %



Front mm



Rear mm



Base Curve



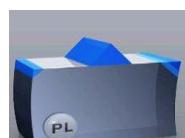
Auto



Manual

② Size Adjustment (-2.0 ~ 2.0mm)

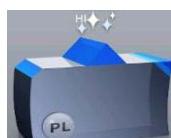
③ Polishing



Polishing Off

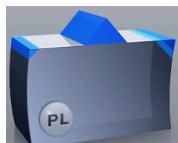


Polishing On

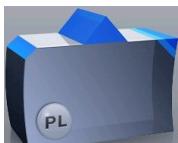


High Polishing

## (4) Front Safety Beveling

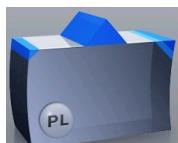


Safety Beveling Off



Safety Beveling On

## (5) Rear Safety Beveling



Safety Beveling Off



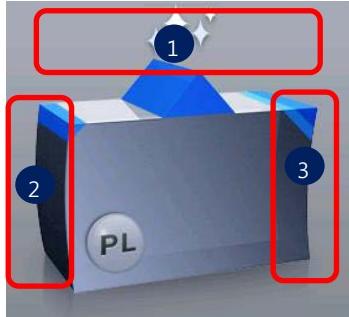
Safety Beveling Small



Safety Beveling Large

## NOTE

- Polishing / Safety Beveling touch screen area



- ① Polishing On/Off
- ② Front Safety Beveling On/Off
- ③ Rear Safety Beveling Off/Small/Large

- When you selected 'Asymmetric Bevel' or 'Semi-U Bevel', Rear Safety Beveling is not available.
- When you selected 'Hybrid Grooving', Safety Beveling is not available.

## (6) Lens Material



Plastic



Polycarbonate



Hi-Index



Glass

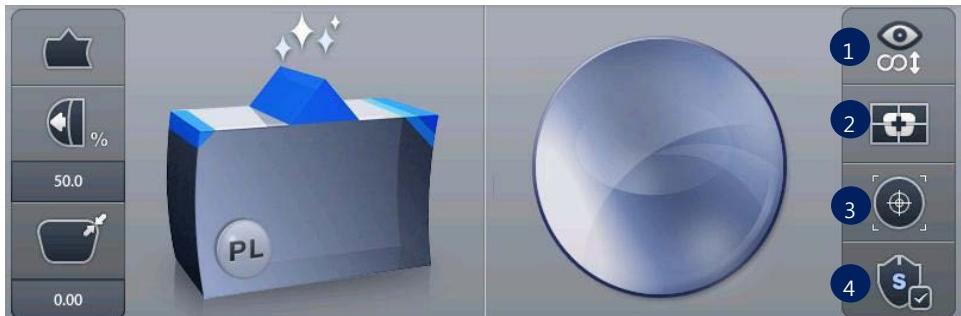


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## NOTE

- If the wheel type of the edger is Asymmetric or Wide, Glass lens cannot be selected.
- Glass lens cannot be processed in the following edging process.  
Polishing, Grooving, Milling, Drilling(HDM-8000)

### 6.1.8. Lens Information



#### ① Lens Type



#### ② Blocking Mode



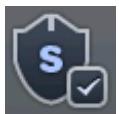
#### ③ Auto/Manual Blocking Mode



## (4) Safety Mode



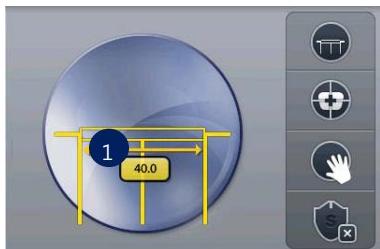
Safety Mode Off



Safety Mode On

## NOTE

- In manual blocking mode, you can change the guideline according to the lens type.
- Normal lens



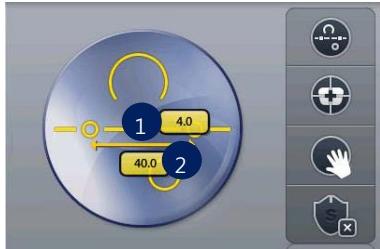
① 3-dot length

- Bi-focal lens



① Near vision area diameter

- Progressive lens

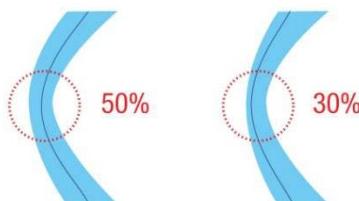


① Eye point height

② Axis length

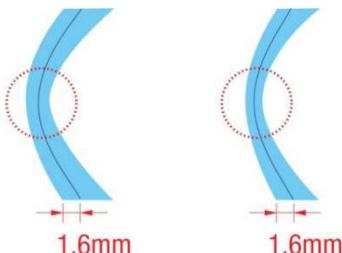
## NOTE

- Boxing Center is useful for the following cases.
  - When PD is in eccentric position
  - When frame is horizontally wide
  - Super Hydrophobic Lens or Ultra Hi-Index Lens
  
- When you choose the options for Bi-Focal, Near Vision Shape will be displayed on the screen. If you input the diameter, you can see the frame shape similar to the actual lens shape and check the interference.
  
- According to the Edging Options, you can control the Beveling and Grooving position.
  -  % Ratio(%) from the front side of the lens
  -  Distance(mm) from the front side of the lens
  -  Distance(mm) from the rear side of the lens
  -  Adjust the position according to the lens base curve and the minimum thickness (0~10)
  -  The position determined automatically to follow the frame curve
  -  Adjust the position manually
  
- Final outputs according to the edging options are different just like the following pictures.



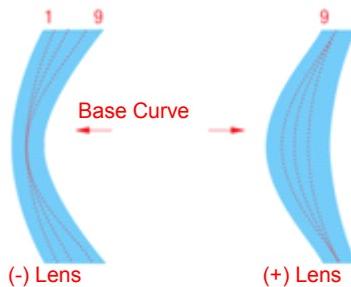
[Ratio(%) mode from the front side]

- Please be cautious that the thinnest part of a lens may be broken when you use ratio (%) mode from the front side.



## [Distance(mm) mode from the front side]

- Using the distance (mm) mode from the front side, the operator can designate the specific moving distance. However, if the thickness of the thin part is less than twice the designated value, the machine will process at internal center, which is 50% in ratio.



## [Base curve mode]

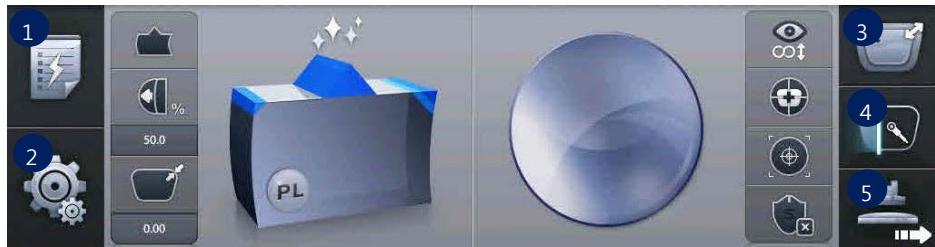
- In the base curve mode, base curves of (+) lenses and (-) lenses exist the opposite side. In this mode, the bevel or grooving line always passes the mid of the thinnest parts, one of which is located at the midst zone of (-) lens and the other is located at the edged zone of (+) lens. And much bigger position value makes the curve closer to the base curve.
- Frame Material, Lens Material and Lens Thickness may affect the quality of Lens Fitting. If needed, execute the Size Adjustment in advance. Frequently used Adjustment Value can be saved at "Frame Fitting" in "Configuration Menu".



## CAUTION

- Be sure to carry out the Edging Process in Safety Mode when the lens is fragile or the axis easily moves.
- Grooving and Polishing is not available for the Glass Lens. Be sure the material of lens is matched with the job options selected in the display before starting the edging process.
- Always be sure to use a new Tape or Sticker and remove moisture on the Lens surface.
- The safety beveling for glass lenses should be performed both at front and rear side. Otherwise, it will cause damage to the human skin or eyes.
- To prevent the distortion of axis, you must use stickers provided by lens manufacturers for blocking of hydrophobic lenses. We do not guarantee the quality of the stickers.

### 6.1.9. Function Button



- ① Expert Job Editor
- ② Menu
- ③ Digital Designer (Digital Pattern + Hole Editor)
- ④ Digital Scan + Tracer UI
- ⑤ Blocking

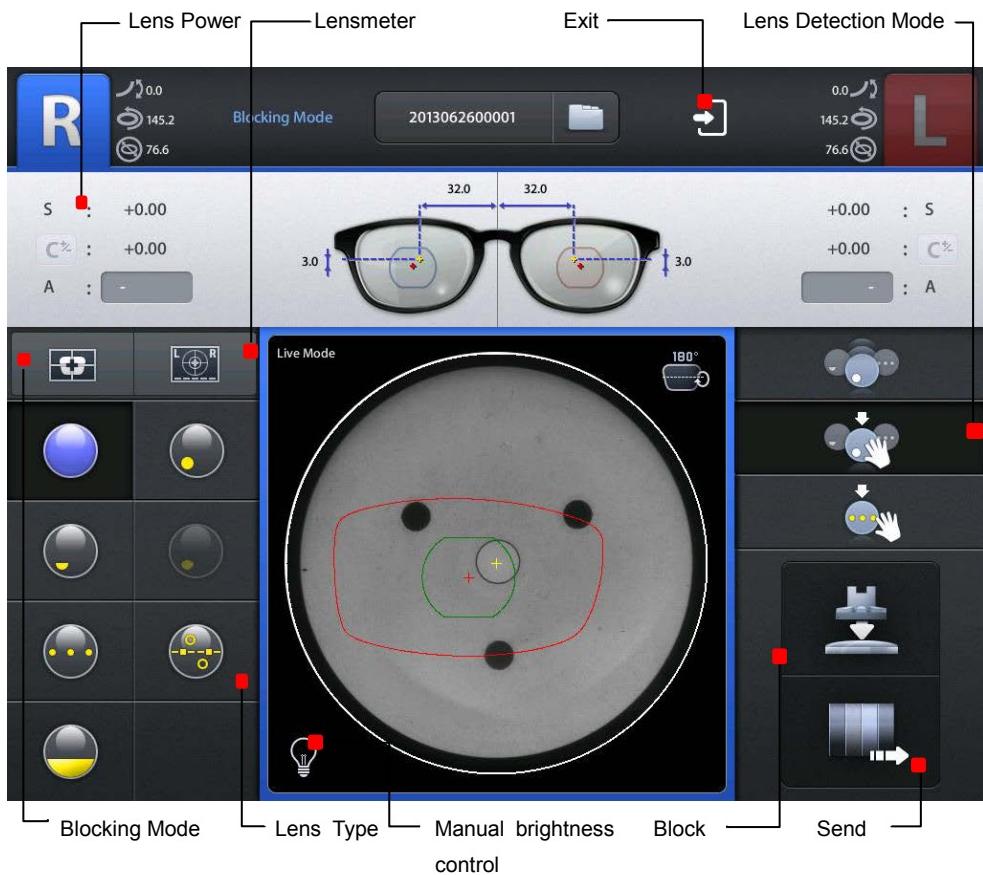
#### NOTE

The expert user can work more quickly by using 'Expert Job Editor'.

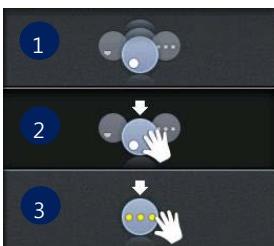
## 6.2. Blocking Screen



Press **button** on the Main Screen to enter blocking screen.



### 6.2.1. Lens Detection Mode



- ① Intelligent : If a lens is placed on the lens supporter, HAB detects the type of lens and its optical center intelligently.
- ② Auto : HAB detects the optical center automatically according to the selected lens type.
- ③ Manual : A guideline for manual blocking is displayed.

### 6.2.2. Lens Type



- ① Single Vision Lens
- ② Bi-focal Lens (Round)
- ③ Bi-focal Lens (Flat)
- ④ Bi-focal Lens (Curved)
- ⑤ 3-dot Lens
- ⑥ Progressive Lens
- ⑦ EX Lens

### 6.2.3. Lens Power



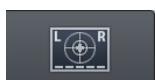
- ① SPH
- ② CYL
- ③ Change Diopter Format
- ④ Prescription axis



### CAUTION

The CYL sign and the CYL axis on your prescription should be identical with those on the blocking screen. Otherwise, the fitted CYL axis could be incorrect.

#### 6.2.4. Lensmeter



It measures SPH and CYL power, AXIS and the optical center of the lens.



#### CAUTION

- Do not move the lens after the measurement is completed. Otherwise, PD or OH of the blocked lens becomes incorrect.
- If you moved the lens after the measurement, you should measure the lens again.

#### 6.2.5. Blocking Mode



① Box Center : Set blocking location to the box center.



② Optical Center : Set blocking location to the optical center.

#### 6.2.6. Blocking / Sending job



① Block : Block the lens.



② Send : Send the job data to the edger.

#### NOTE

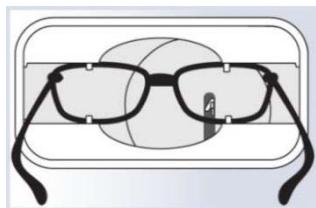
The procedure for blocking is as follows:

- ① Put a LEAP III tape on the lens adaptor
- ② Insert the lens adaptor into the lens adaptor setter.
- ③ Detect the optical center by setting the lens detection mode and the lens type.
- ④ Press the Blocking button on the Blocking screen.

### 6.3. Blocking for the Different Types of Lenses

#### 6.3.1. Single Vision Lens

- ① Place a frame on the gripper of the frame reader and read the frame.



- ② Load the traced job data in the Job Manager.



- ③ Set layout data or edging options on the main screen if needed.



- ④ Move on to the blocking screen.



- ⑤ Place the lens on the lens supporter and then select single vision as the lens type on the blocking screen.



- ⑥ Press the MEASUREMENT button to check the optical center and the lens power.



- ⑦ After finishing the measurement, the BLOCK button blinks. Press the BLOCK button to start blocking.

#### NOTE

- After the measurement, the frame shape is displayed in blue color on the blocking screen based on the measured information.
- Low-cylindrical single vision lens with equal or less than 0.5D may cause distortion in axial data measured by the lensmeter module. So, please point 3 dots with the lensmeter and select 3-dot mode for blocking this kind of lens.

## NOTE

- If you execute the lensmeter to measure cylindrical single vision lens without inputting the axis value in advance, numeric keypad pops up for you to input the value. The measurement is completed, if you had inputted the value in advance. In this way, you can prevent yourself from forgetting to input the axis value. Basically, value is marked as '-'(empty state), before you input the axis value.



- Following message will pop up, if the lens was not measured as a cylindrical single vision by the lensmeter (even if you had inputted the axis value in advance). Press the RESET button, then the value becomes '-'(empty state) again and you can move on to next step.



## NOTE

- Following message pops up when the measurement is interrupted by dust or markings on the lens. In this situation, try to measure again after cleaning the lens or moving the lens.



### 6.3.2. Bi-focal Lens

- ① Procedure for preparing job data is same with single vision lens (see 6.4.1)
- ② Put the lens on the lens supporter.
- ③ Set the Lens Detection Mode to Intelligent Mode or select lens type to Bi-focal in the Auto Mode.
- ④ After the lens detection, the frame shape is displayed in blue color on the blocking screen and the BLOCK button blinks.



- ⑤ Press the BLOCK button to start blocking.

**NOTE**

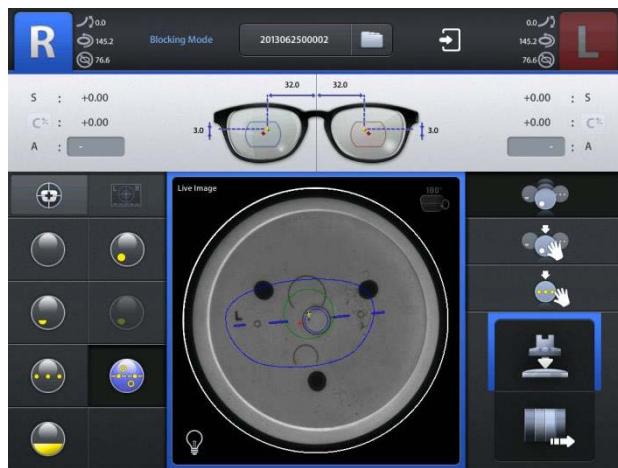
- For an accurate measurement, place the lens avoiding overlap of near vision area and the circle at the center of the plate.
- It is recommended to place the plate like an inverted triangle for the minimization of its interference. (as shown below)



- When the near vision area of bi-focal lens or progressive lens is cut too much, you can modify the shape with Digital Pattern, or you can even modify it to fit on wearer's face.
- The Optical Blocking is usually preferred for a bi-focal lens to prevent a lens tilting during edging.

### 6.3.3. Progressive Lens

- ① Procedure for preparing job data is same with single vision lens (see 6.4.1)
- ② Set the Lens Detection Mode to Intelligent or select lens type to Progressive lens in the Auto mode
- ③ Put a lens on the lens supporter.
- ④ After lens detection, the frame shape is displayed in blue color on the blocking screen and the BLOCK button blinks

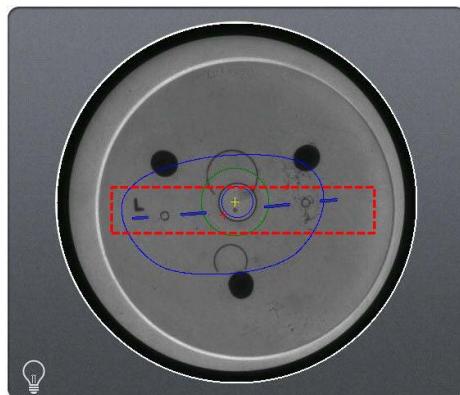


- ⑤ Press the BLOCK button to start blocking.

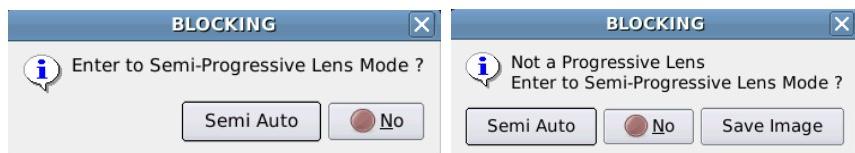
#### NOTE

- For a progressive lens, place it in order that the far vision area faces upward. These days, there are lots of customized progressive lenses, so this machine cannot set the lens direction automatically. Therefore this is mandatory for operators.
- The eye point can be detected automatically when horizontal lines, a cross marker for eye point and an arc for far vision exist exactly.
- If a cross marker for eye point or horizontal lines aren't perfect, you can select the eye point and horizontal line with the touch pointer in Semi-auto Progressive Lens Mode.
- You can set Semi-Auto Progressive Lens Mode by touching the recognized horizontal line even if you had found the optical center.

#### 6.3.4. Progressive Lens – Semi Auto



- ① This Semi-Auto Progressive Lens Mode is for when the detection result is not accurate because of the unclear marks of the progressive lens.
- ② Set the Lens Detection Mode to Progressive lens in the Auto mode.
- ③ Following messages will pop up if you select a line on the screen or the blocker cannot detect the progressive lens.



- ④ Pressing Semi-Auto Button to set Semi-Auto Progressive Lens Mode

### Semi Auto Progressive Lens Mode Screen



- ① Auto Detection. You can select or deselect the detected line by touching.



- ② Select all detected lines.



- ③ Deselect all detected lines.



- ④ Set axis with two points by dragging them.



- ⑤ Set eye point by dragging.



- ⑥ Set axis and eye point by using laser marks on the lens. Please mark two dots manually.



- ⑦ Exit – Selected axis and eye point are reflected on the blocking screen if you press this button.

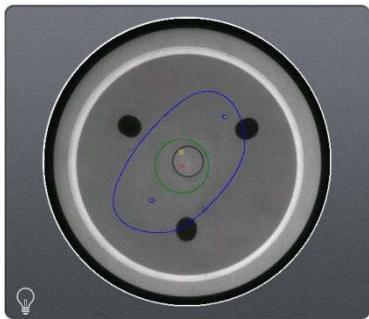


- ⑧ Adjust the brightness of LED manually.

**NOTE**

- Laser Mark Mode(  ) provides a method to set axis and eye point by using laser marks on lens surface when the progressive lens's marking is damaged.

- Laser Mark



- ① Find two laser marks on the lens and mark dots.
- ② After place the lens and press LASER MARK button.
- ③ Input the height from axis to eye point with numeric keyboard. (0~6 mm)
- ④ Then, autoblocker will recognize the two marks and find out axis and eye point based on the height information.

### 6.3.5. 3-dot Lens

- ① Procedure for preparing job data is same with single vision lens (see 6.4.1)
- ② Set the Lens Detection Mode to Intelligent or select lens type to 3-dot lens in the Auto mode.
- ③ Place a lens on the lens supporter.
- ④ After the lens detection, the frame shape is displayed in blue color on the blocking screen and the BLOCK button blinks.



- ⑤ Press the BLOCK button to start blocking.

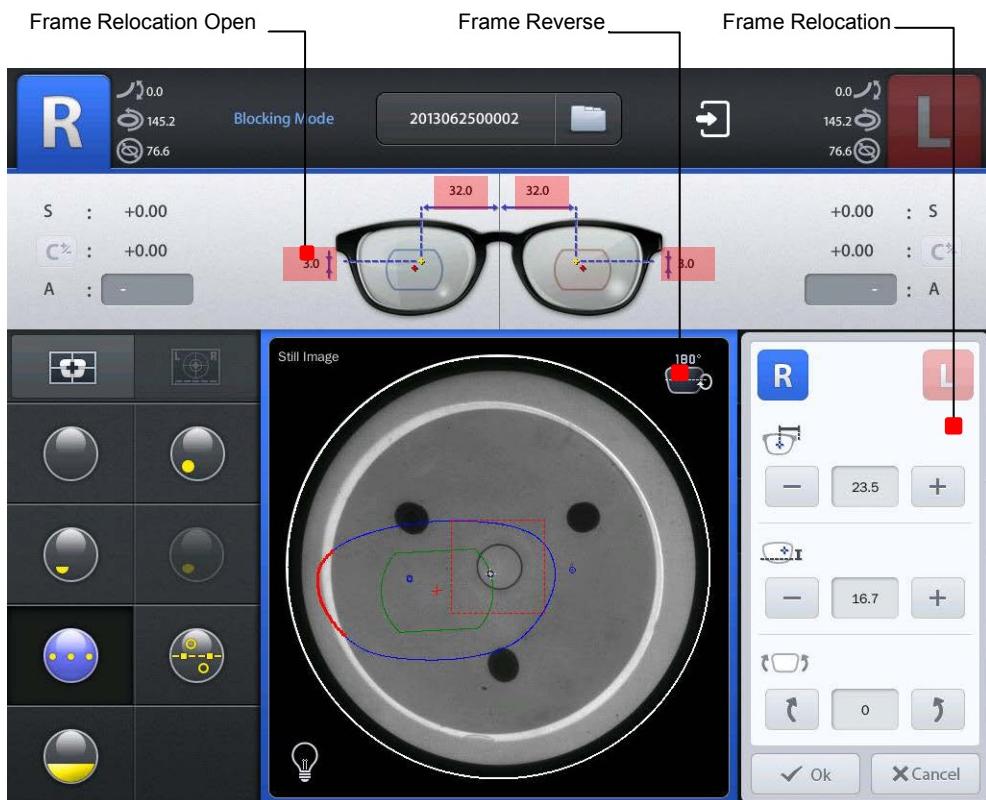
#### NOTE

- Blocking area is within a square (2cm on a side). This area is displayed in red color when the blocking location gets out of this area. (as follows)



### 6.3.6. Frame Relocation

After detecting optical center, the auto blocker locates the frame shape on the lens shape for an optimized edging. But the frame might be slightly off the lens shape due to the frame shape, PD, and OH. In that case, you can relocate the frame shape by adjusting PD, OH or axis by yourself.



The area that goes off the lens shape is displayed in red color (as shown above). Press PD or OH value, then adjustment window for frame relocation will pop up.



- ① Side Selection
- ② PD Adjustment
- ③ OH Adjustment
- ④ Axis adjustment ( -30 degree ~ 30 degree )
- ⑤ Apply
- ⑥ Cancel

### 6.3.7. Manual Blocking Mode

This manual blocking mode is for blocking a lens manually.



#### Lens Type



- ① 3-dot Lens
- ② Bi-focal Lens (Round)
- ③ Bi-focal Lens (Flat)
- ④ Bi-focal Lens (Curved)
- ⑤ Progressive Lens

**Tool Button**

- ① Adjustment of frame position
- ② Manual adjustment of LED brightness
- ③ Live image Normal / Zoom (x2)
- ④ Change of guide line

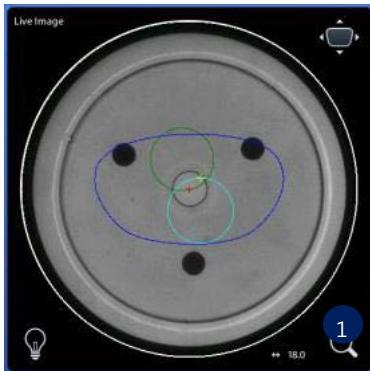
**NOTE**

- You can change the guideline manually according to the lens type.
- 3-dot lens



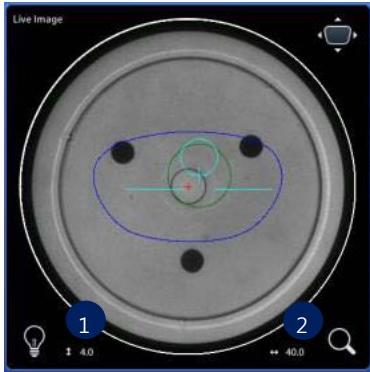
① 3-dot length

- Bi-focal lens



① Near vision area diameter

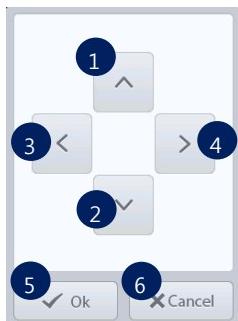
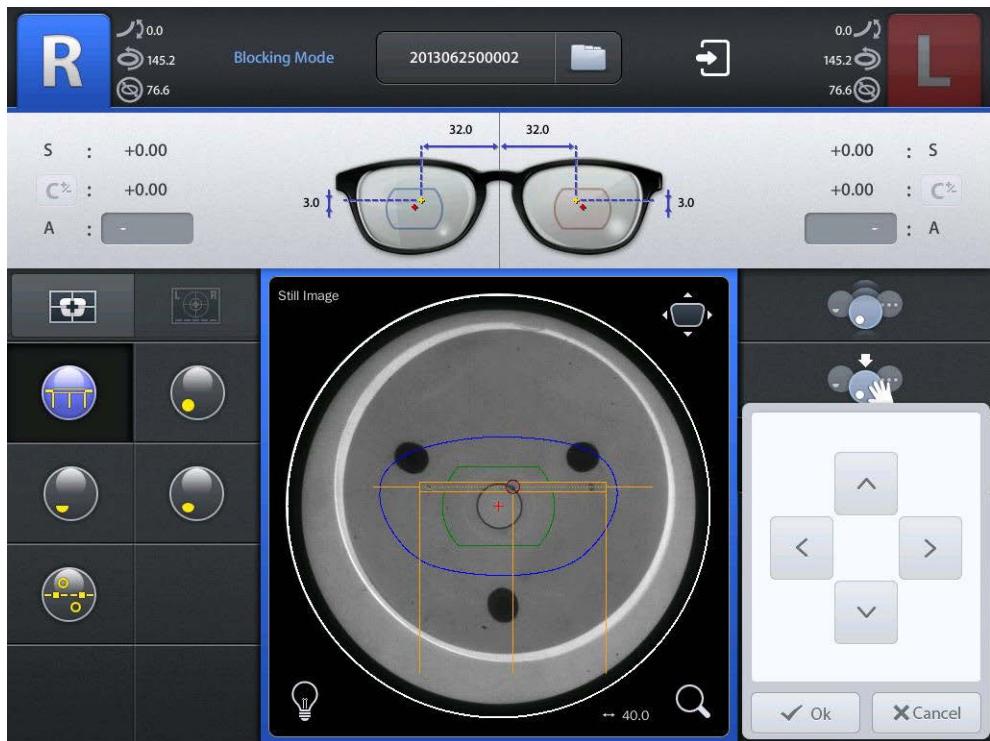
- Progressive lens



① Eye point height  
② Axis length

### Frame location adjustment

If it is difficult to place the lens because of the lens size or eccentric optical center, move the frame shape using .



- ① Up
- ② Down
- ③ Left
- ④ Right
- ⑤ Apply
- ⑥ Cancel

#### 6.4. Job Manager



##### 6.4.1. Job Selection Tab



- ① Waiting Job: Newly received Job data from Frame Reader or Digital Scan.
- ② Working Job: Blocking job or Editing job.
- ③ Completed Job : Blocked Job
- ④ Saved Job List : Job data saved in SD memory card
- ⑤ Internal Data : Internal job data for testing

#### 6.4.2. Function Button

- ① Open : Load the selected job
- ② Save : Save the selected job to the SD memory card
- ③ Search : Search Job number
- ④ Delete : Delete selected job



#### NOTE

- Save function is only available on Waiting/Working/Completed list.
- If the power of the system is turned off, all job data on Waiting/Working/Completed list are deleted. So if needed, be sure to save the job data to SD memory card before turning off the system.
- Internal data cannot be deleted.
- Good care must be taken not to delete Saved job in the SD memory card permanently by mistake.

#### 6.4.3. Waiting Job Tab

**Job Manager**

1 Job Number	2 Type	3 Reading	4 Frame Type	5 FPD	6 DBL	7 Time
2013040800005			Pattern	62.6	15.0	2013-04-08 16:13:56
2013040800004			Pattern	73.0	15.0	2013-04-08 16:13:51
2013040800003			Metal	66.0	15.0	2013-04-08 16:13:46
2013040800002			Pattern	59.0	15.0	2013-04-08 16:13:43

- ① Job Number: Displays the Job Number.
- ② Type: Displays the Edging Type with icon.
- ③ Reading: Displays the Tracing State with icon.
- ④ Frame Type: Displays the Frame Type.
- ⑤ FPD: Displays the FPD value.
- ⑥ DBL: Displays the DBL value.
- ⑦ Time: Displays the job received time

#### 6.4.4. Working Job



- ① Blocking : Displays the progress of blocking.
- ② Time : Displays the job start time.

#### 6.4.5. Completed Job Tab



- ① Time : Displays the job finish time.

**NOTE**

- You can check current processing state with the following icons

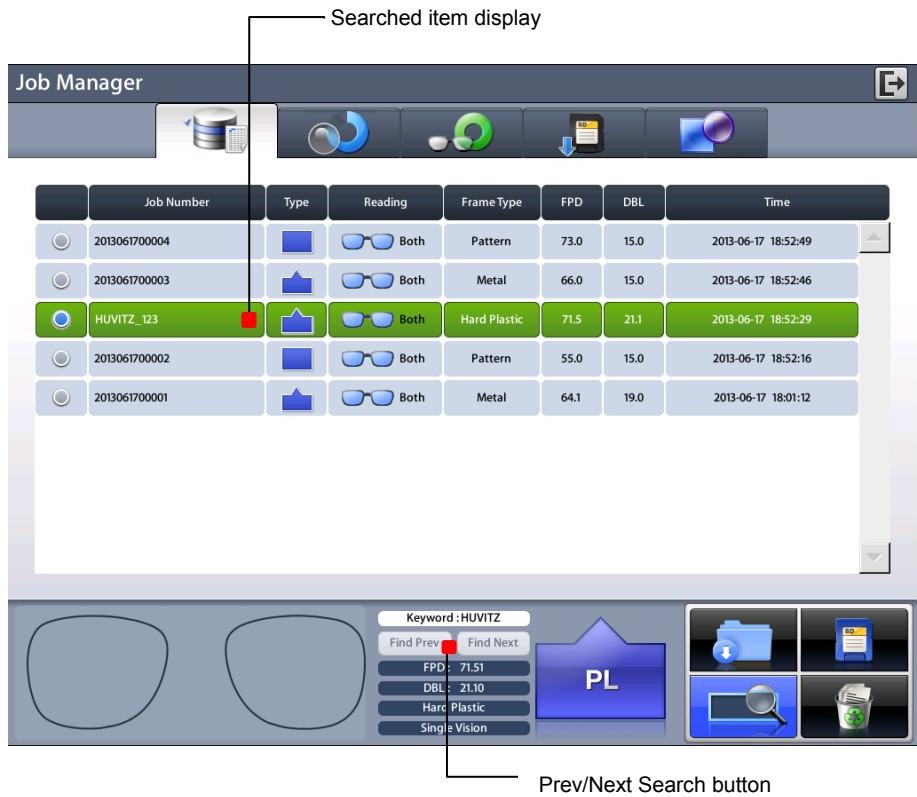
1 	① Waiting
2 	② One side blocking completed
3 	③ Both side blocking completed

#### 6.4.6. Job Searching

The 'Job Search' function finds the JOB which user want to get, on the job list.

- ① Start 'Job Search Mode' by pressing the search button.
- ② Enter the job number you want with the virtual keyboard.
- ③ Check the list.





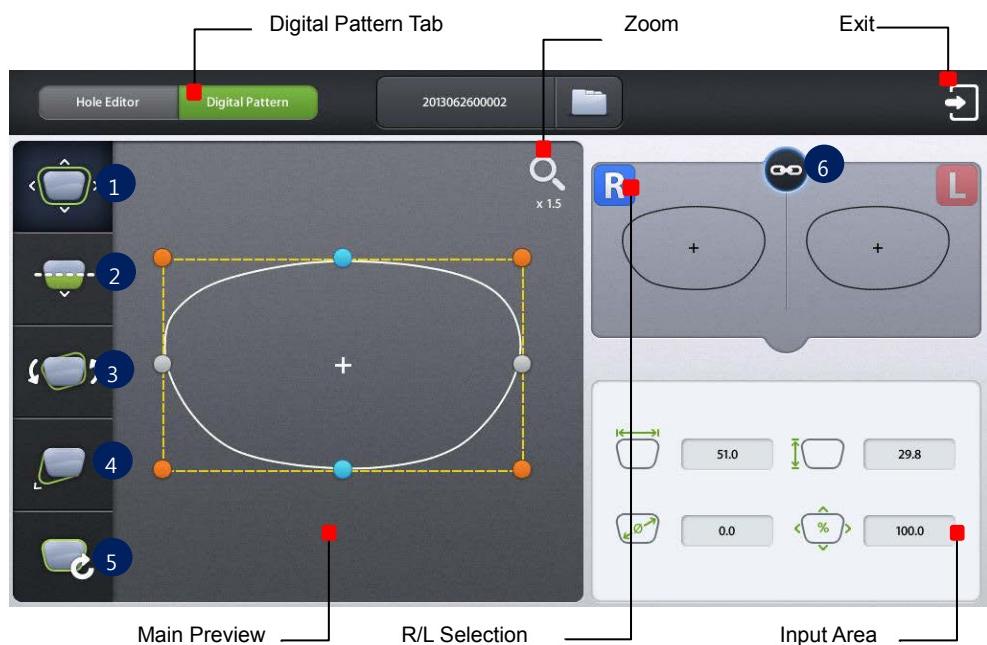
### NOTE

- You can search with only few letters, not the whole words. For example, you can search the Job Number 'HUVITZ\_123' only with 'HUVITZ' or '123'.
- You can look at the other research results with 'Next' and 'Prev' button
- You can finish the Job Search mode by pressing the search button one more time. The search button shows the state change of this mode.

## 6.5. Digital Pattern

The “Digital Pattern” modifies the lens shape in left/right, top/bottom as well as direction and optimizes the fitting for Rimless and Semi-Rimless.

To use Digital Pattern, press  button on the bottom right of the main screen and then select Digital Pattern tab at top left of the screen.

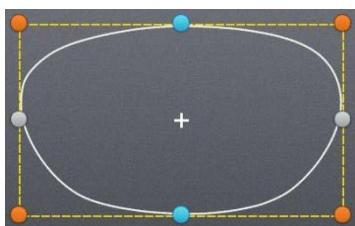


- ① Enlargement/Reduction
- ② Near Vision Area Enlargement/Reduction
- ③ Rotation
- ④ Partial Modification
- ⑤ Reset
- ⑥ R/L Sync

### 6.5.1. Enlargement/Reduction

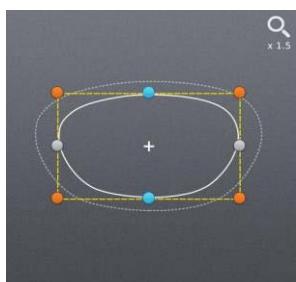
Lens shape can be modified both horizontally and vertically.

#### Touch Interface

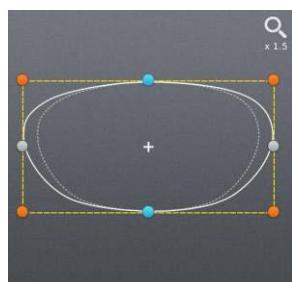


To modify lens shape, make use of the 8 touch points around the lens shape.

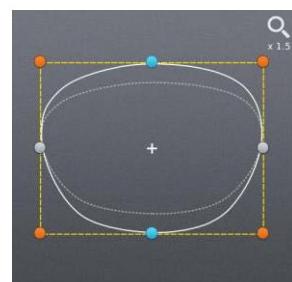
- Orange: Horizontal + Vertical
- Grey: Horizontal
- Blue: Vertical



Horizontal + Vertical

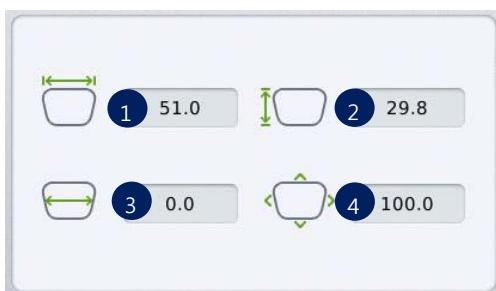


Horizontal



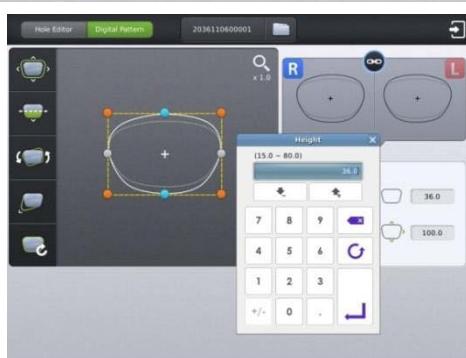
Vertical

#### Value Input



You can modify the lens shape by entering the values directly in the Input Area.

- ① Width
- ② Height
- ③ Size (mm)
- ④ Percent (%)

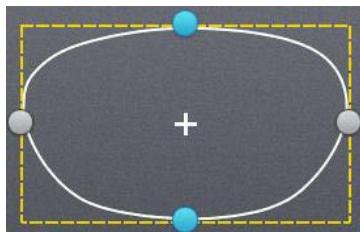


After selecting the item to change, enter the value using the numeric keypad.

### 6.5.2. Near Vision Area Enlargement/Reduction

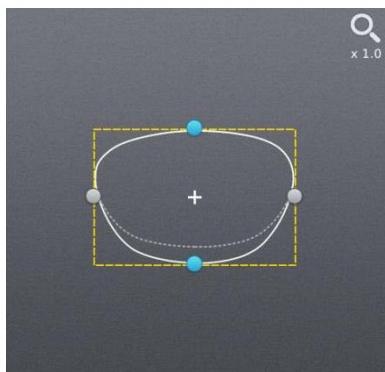
Lens shape can be changed in four directions (Bottom - Near Vision Area, Top, Left, Right).

#### Touch Interface

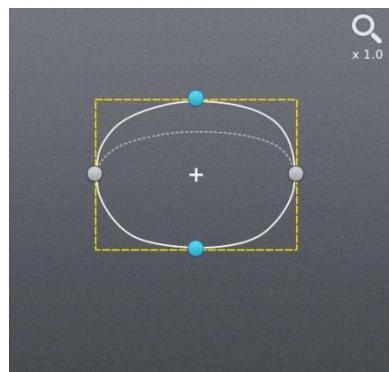


To modify lens shape, make use of 4 touch points around the lens shape.

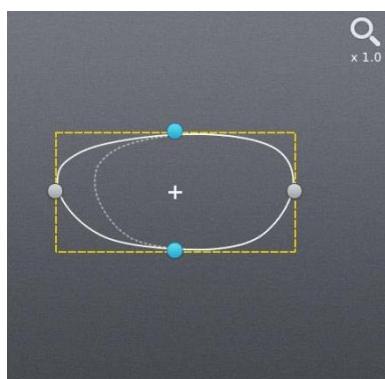
- Left or Right
- Top or Bottom



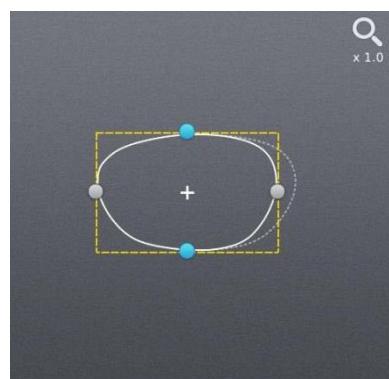
Near Vision Area (Bottom)



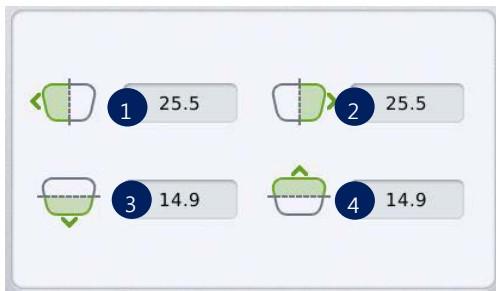
Top



Left



Right

**Value Input**

You can modify the lens shape by entering the values directly in the Input Area.

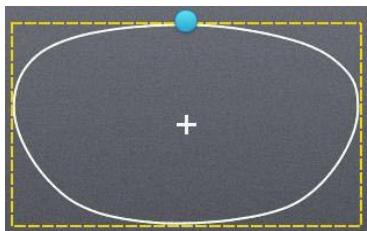
- ① Left
- ② Right
- ③ Near Vision Area (Bottom)
- ④ Top



After selecting the item to change, enter the value using the numeric keypad.

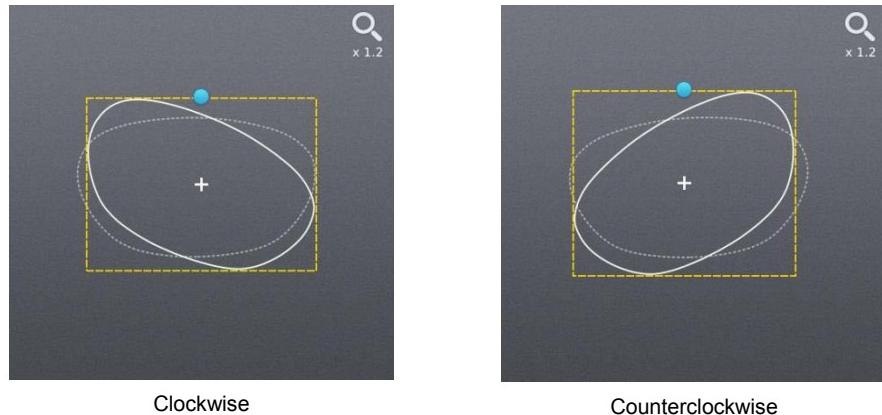
**6.5.3. Rotation**

Lens shape can be rotated.

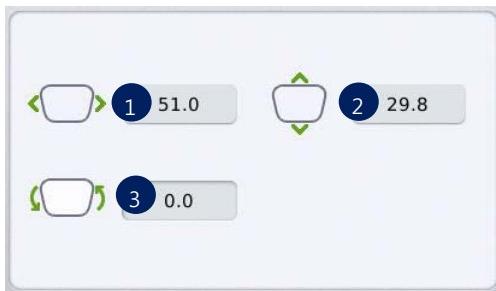
**Touch Interface**

To rotate lens shape, touch and drag the touch point on top of the lens shape.

Touch Point



### Value Input



You can modify the lens shape by entering value directly in the Input Area

- ① Width
- ② Height
- ③ Angle (Clockwise, 0 ~ 360)

➤ ①, ② are the same function in the Enlargement/Reduction mode.

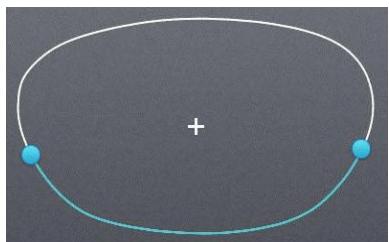


After selecting the item to change, enter the value using the numeric keypad.

#### 6.5.4. Partial Modification

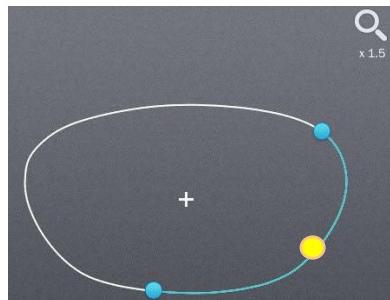
Lens shape can be modified partially.

##### Touch Interface

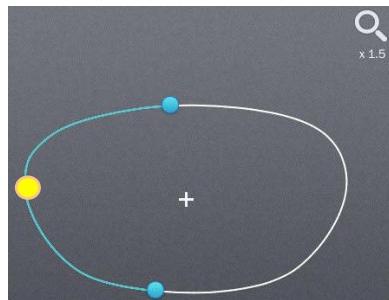


Set modification area by touching any point on lens shape. The point becomes the center of the modification area. To adjust modification range, touch and drag one of 2 touch points around the lens shape

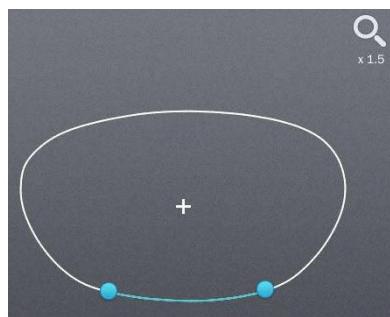
- Range adjustment touch point
- Range center touch point



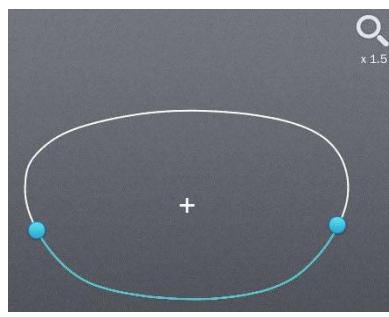
Right Bottom



Left

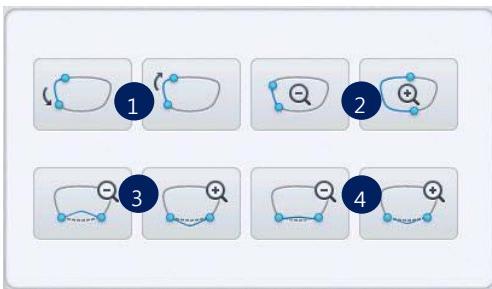


Modification area reduction



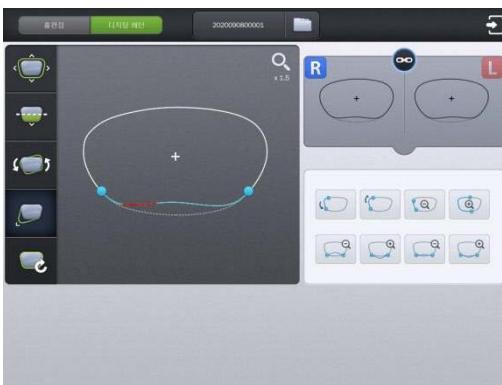
Modification area enlargement

### Modification range/Lens shape change



You can modify the lens shape with Input button.

- ① Position change  
(counter clockwise, clockwise)
- ② Range change  
(enlargement, reduction)
- ③ Wide Partial Modification  
(concave, convex)
- ④ Partial Modification  
(concave, convex)



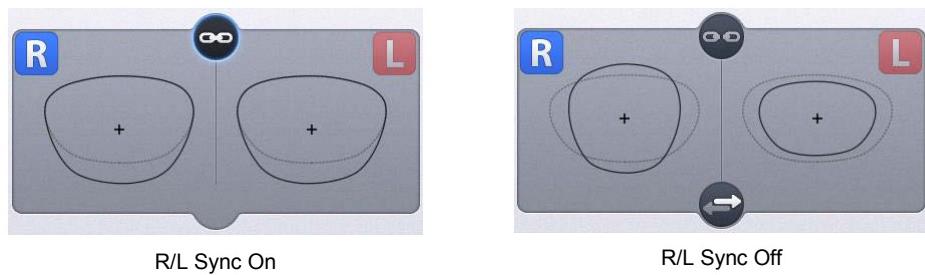
During partial modification, where is not able to process physically is colored red.

#### 6.5.5. Reset

Recover original lens shape.

### 6.5.6. Toggle R/L Sync

Function for R/L Sync function.



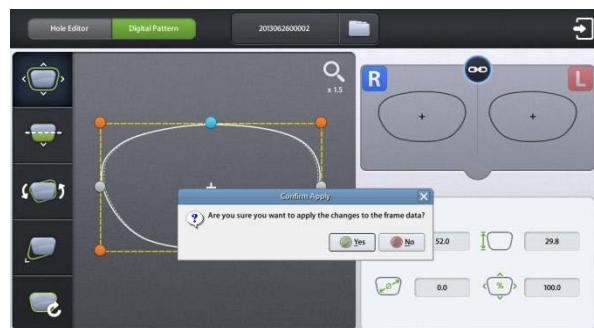
#### NOTE

- “Copy” button ( ) is available when R/L sync option is turned off. Shape of the current side is copied to the other side by pressing this button.
- Press or button to change the side.

### 6.5.7. Exit

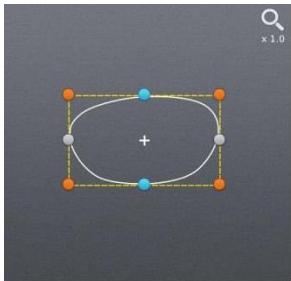
Quit digital pattern and return to the main screen.

To apply modified lens shape, Press the “Apply” button on the confirm dialog box.

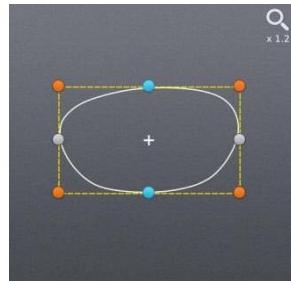


**NOTE**

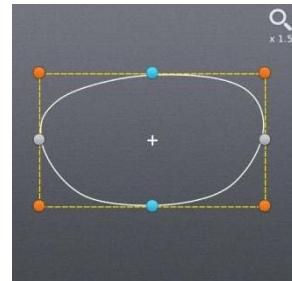
- You can modify half-framed lens or rimless lens conveniently by using the digital pattern.
- The digital pattern is useful for the bi-focal lens or the progressive. Sometime too small frame shape might cut out the near vision area. In this case, the digital pattern provides the enlargement of the frame shape.
- Be sure to check optical center position and PD/OH value after digital pattern is applied.
- When digital pattern is applied, FPD or bridge size is recalculated according to the digital pattern applying option on Configuration menu.
  - Fix FPD – fixing FPD, re-calculate bridge size depending on modified lens shape
  - Fix Bridge Size – fixing bridge size, re-calculate FPD depending on modified lens shape
- Press the Zoom icon to change zoom ratio of the lens shape.



1.0x



1.2x

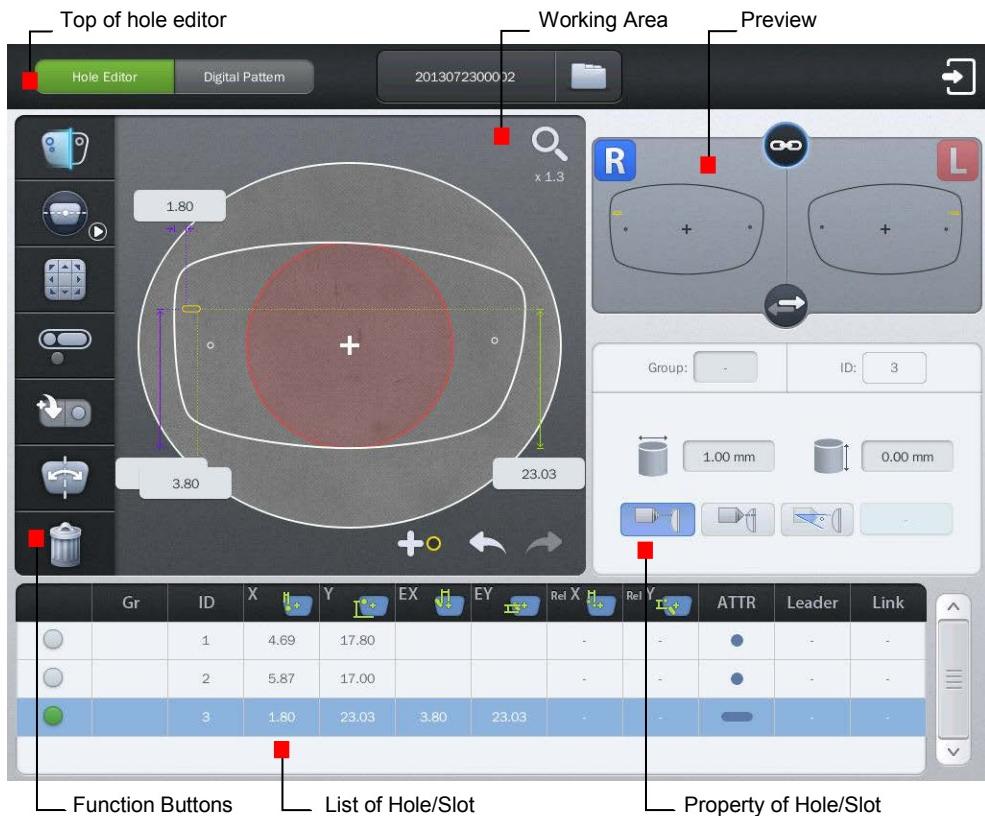


1.5x

## 6.6. Hole Editor

This screen is for the edition of hole position for drilling.

To use the hole editor, click the button  on the main screen right below, and then select the hole editor button in the upper left.



### NOTE

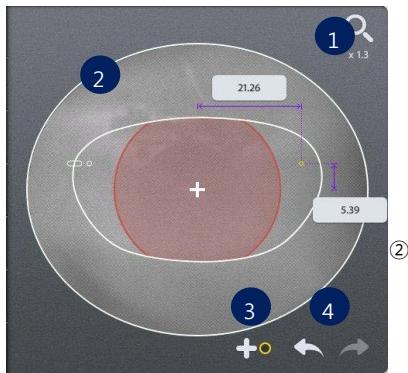
To perform a drilling, the blocking mode must be set to the center of the frame (box center). If you add a slot or hole on the hole editor, the blocking mode is changed to the center of the frame (box center), automatically. In this case, the blocking mode is fixed to the center of the frame (box center) and cannot be changed by the user. If all of the holes / slots are removed on the hole editor, the user can change the blocking mode.

### **6.6.1. Upper Side of Hole Editor**



- ① Hole Editor: Starts the hole editor. If the button is green, hole editor is now available.
  - ② Digital Pattern: Starts the digital pattern.
  - ③ Job Number: Displays the job number of currently working job. You can modify the number by touching here.
  - ④ Exit: Terminates the hole editor.

### **6.6.2. Working Area**

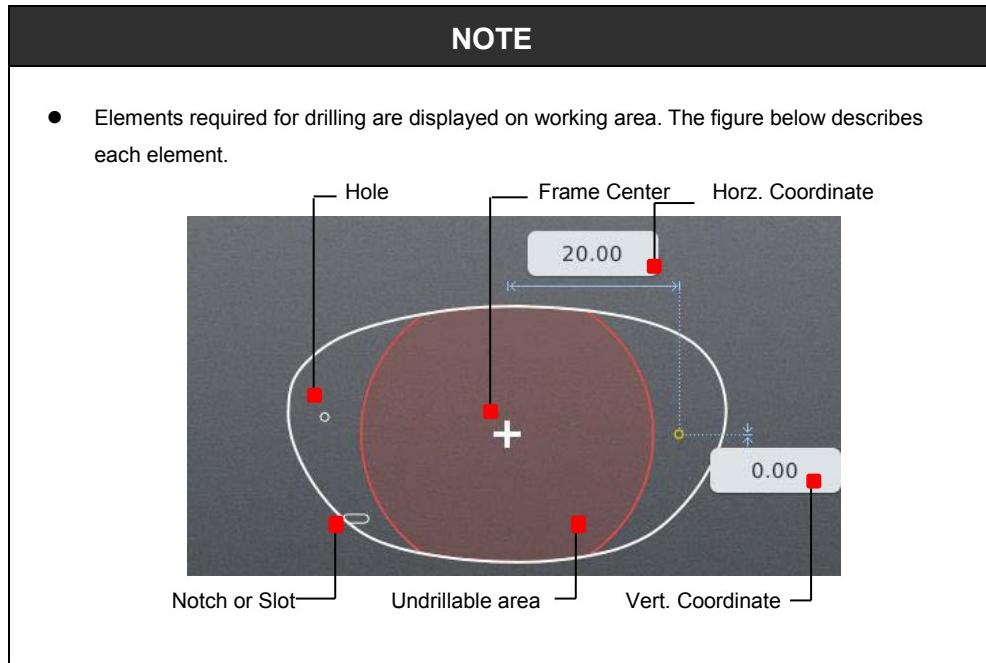


- ① Magnification: You can select the magnify power either 1.3 times (default) or 5 times (magnified). Partial image of the frame shape is displayed on working area as you magnify the screen. If you want to see other parts of the image, please touch the red circle on preview.
  - Working Area: Working area displays the shape of frame and holes/slots. The hole/slot in yellow is the selected one. The orange holes/slots mean the same group with selected one. The selected hole/slot is displayed with their coordinates.

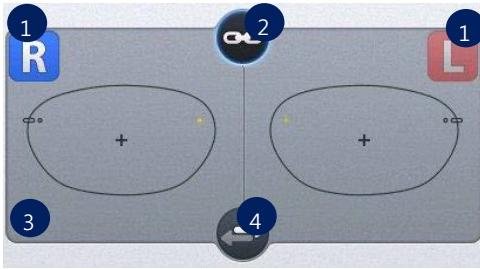
The user can move the selected hole/slot by touching the LCD or inputting their coordinates directly.

- ③ Add hole/slot: The user can add hole/slot by pressing button or pre-defined hole/slot set by pressing preset buttons ( ).

④ Undo()/Redo(): Adding, deleting, moving and changing of hole/slot



### 6.6.3. Preview



- ① Select Right/Left: You can change the selection of the left/right. When the camera mode is set to 'still image', you cannot change the side (L/R) because the frame is not identical with the image. You must change the camera mode from still image to live image first to change the side selection.
- ② Right/Left synchronization: The synchronization of the right and left side can be turned on or off. Properties or changes of the selected side are identically applied to the other side, when the synchronization is on.
- ③ Preview: You can see the shape of holes / slots on both sides at once.
- ④ Copy to the other side: You can copy the holes / slots of the selected side to the other side. The modifications which were performed without the synchronization can be applied to the other side by this function. When you execute this function, all of the holes /slots on the other side will be deleted first.

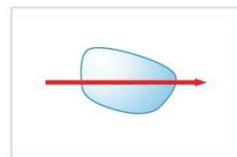
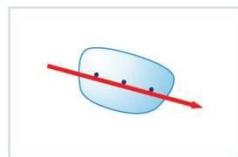
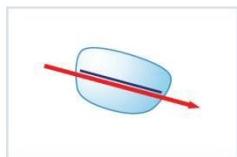
#### 6.6.4. Function Buttons



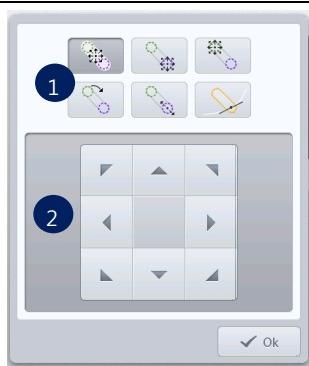
- ① Hole / Slot Detection: You can use this button when you want to add holes/slots after the frame reader has read a demo lens. If the camera is on live image mode, you can start detection by pressing this button. If the camera is on still image mode, you can change the mode to live image and start detection by pressing this button.
- ② Switch Camera Mode: You can switch the camera mode. When you switch the mode from live to still, shape of the demo lens is read and shapes on LCD and camera are matched to each other. When the camera is the state of the live image, it works not only to switch the camera state the still image, but also to make the frame shape on the LCD overlap to the frame shape on the camera image.
- ③ Hole / Slot Easy Moving: You can move the selected holes/slots. This function provides you precise movement.
- ④ Grouping: You can select more than a hole/slot and bind them as a group. Select holes/slots which have no group or belong to different groups, and press this button. If you want to cancel the group formation, select one or more holes/slots within the group and press this button.
- ⑤ Preset: This provides the function to manage preset configuration.
- ⑥ Mirroring: Selected hole / slot is copied to the symmetric position based on the center of frame. If the selected hole / slot belongs to a group, all holes / slots in that group are copied, and they will form a new group.
- ⑦ Delete Hole / Slot: This function deletes the selected hole / slot. If it belongs to a group, all of the holes / slots in that group are also deleted.

#### NOTE

- Demo lens for switching camera mode and detection of hole/slot must have an axis indicator. There are 2 ways to indicate the axis. ① To draw a straight line along the axis. ② To mark the 3 dots along the axis. If there is no axis indicator, the horizontal line on the camera image is regarded as the axis of demo lens. Red lines on the below figures respectively represent the axis recognized.

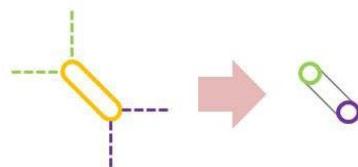


- When you press the Hole / Slot Easy Moving button, following screen will pop up. You can use this to move the hole / slot.



- ① Select moving type: You can select moving type. When the selected one is a hole, it supports just one moving type. When the selected one is a slot, it supports 6 types of moving.
- ② Move hole / slot: It provides moving buttons according to the selected moving type. How to move the selected hole / slot according to the moving type is explained below.

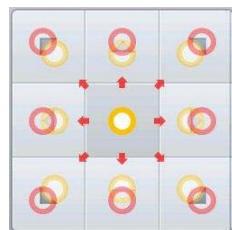
- The slot icon on the buttons of moving type represents the start( ) and end( ) position like below figure.



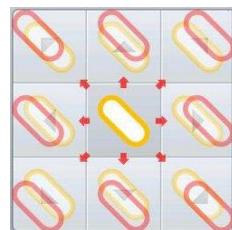
- The details of how to move the hole / slot by moving type are like below.



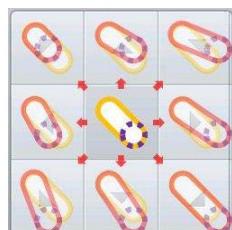
This provides the function of parallel movement. The movement of hole / slot is like below.



(Hole)



(Slot)



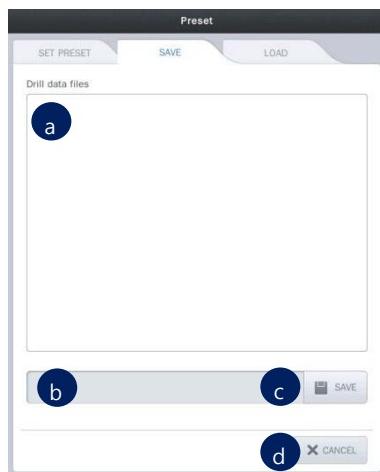
(Slot only) This provides the function to move the start position of a slot.

		(Slot only) This provides the function to move the end position of a slot.
		(Slot only) This provides the function to rotate a slot.
		(Slot only) This provides the function to change the length of a slot.
	<p>(Slot only) This provides the function to change a slot to a notch and to move the notch. The slot will be moved to the edge of a frame close to current position, and become a notch. The slot can be moved with the notch remained by using the moving buttons. The up and down buttons are for parallel movement of the slot along with the frame. The left and right buttons are for length modification of the slot lying across the frame. The below figure is the example of the notch moving. (The thick solid black line is the frame edge.)</p>	

## NOTE

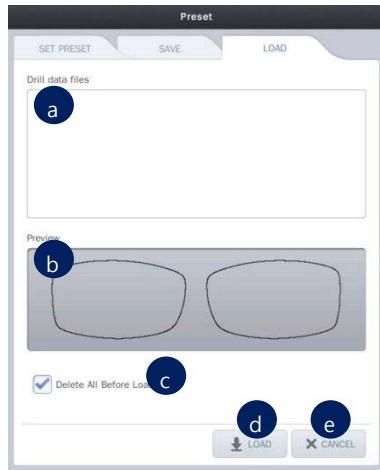
- On the preset, there are three functions.

  - ① Save the hole / slot data: You can save the hole / slot data of the current job to the SD card.



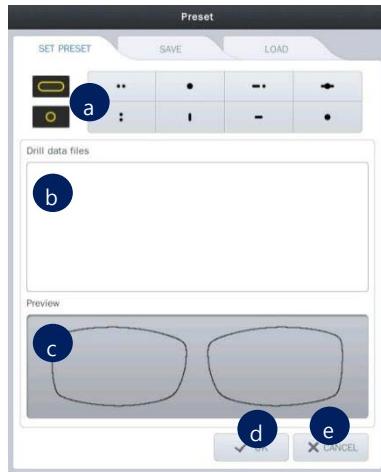
- a. List of hole / slot data: This displays a list of hole / slot data in the SD card.
- b. File name: You can set the file name of the hole / slot data to be saved.
- c. Save: You can save the hole / slot data by pressing this button.
- d. Cancel: Exit the preset configuration.

- ② Load the hole / slot data: You can load the hole / slot data from the SD card and include them to the current job.



- a. List of hole / slot data: This displays the list of hole / slot data in SD card.
- b. Preview: This displays the shape of the selected hole / slot data.
- c. Load option: You can choose whether to keep or to delete the existing hole / slot data before adding the loaded data. The default value for this option can be specified on the preference.
- d. Load: You can load the hole / slot data by pressing this button.
- e. Cancel: Exit the preset configuration.

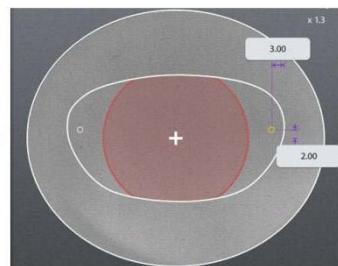
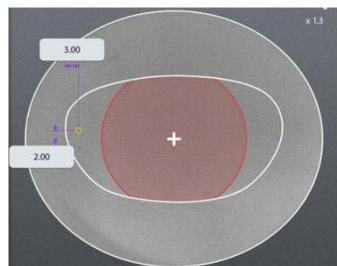
- ③ Set preset: You can set the 8 preset buttons. (  ). You can put hole/slot saved in SD card to each button. These 8 presets can be used to add the favorite set of the hole / slot data to the current job, easily



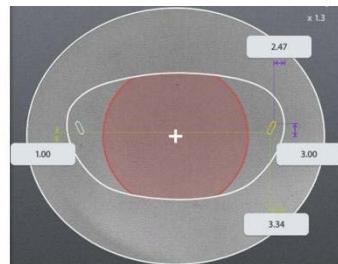
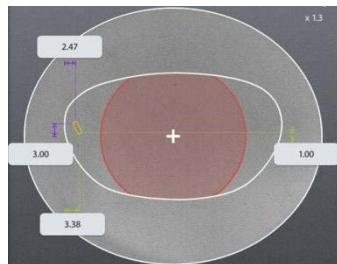
- a. Select the preset button: Select the preset button to apply the hole / slot data. And then choose hole / slot data you want.
- b. List of hole / slot data: This displays the list of hole / slot data in SD card.
- c. Preview: This displays the shape of the saved hole / slot data.
- d. OK: Applies all of the changings.
- e. Cancel: Exit the preset configuration.

**NOTE**

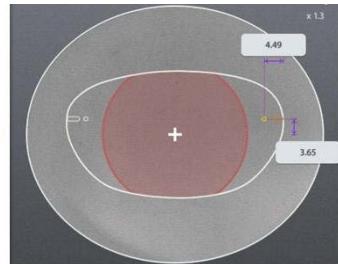
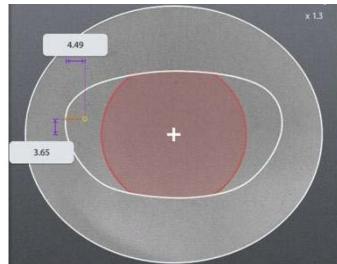
The mirroring is a function that copies the selected hole / slot to the opposite side. The distance between mirrored hole/slot and the frame edge is same with the distance between original one and the frame edge. In case of slot, the distance between the start point of a side (closest point to the frame) and the frame must be identical with the distance between the end point of the other side (closest point to the frame) and the frame (The two points must be symmetric). If the selected hole / slot belong to a group, all holes / slots are also mirrored, and they will form a new group.



[Mirroring the hole]



[Mirroring the slot]



[Mirroring the group of hole / slot]

### 6.6.5. List of Hole/Slot

It displays the hole / slot list of the current job. You can change the position of the hole / slot by pressing the coordinates displayed on the list.

1	2	3	4	5	Gr	ID	X	Y	EX	EY	Rel X	Rel Y	ATTR	Leader	Link
						2	-21.26	5.39			-	-	-	-	-
					1	3	-26.12	5.39	-24.12	5.39	-	-	-	-	-
					1	4	-22.12	5.39			-	-	-	-	-

- ① Select the hole / slot: You can select the holes / slots to make a group by pressing here. The green circle is the selected one.
- ② Group ID: It displays the group id that the hole / slot belong to. But if the hole / slot do not belong to a group, nothing will be displayed here.
- ③ Hole / slot ID: It displays the hole / slot ID for classifying each other.
- ④ Change how to display the X coordinate: You can change the way X coordinate is displayed.

Followings are the three options.



Based on the center of frame (distance from the center of frame)



Based on the box (distance from the box which is surrounding the frame)



Based on the frame edge (distance from the edge of frame)

- ⑤ Change how to display the Y coordinate: You can change the way Y coordinate is displayed.

Followings are the two options.



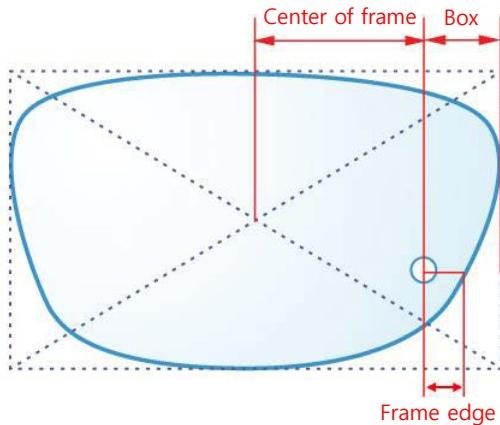
Based on the center of frame (distance from the center of frame)



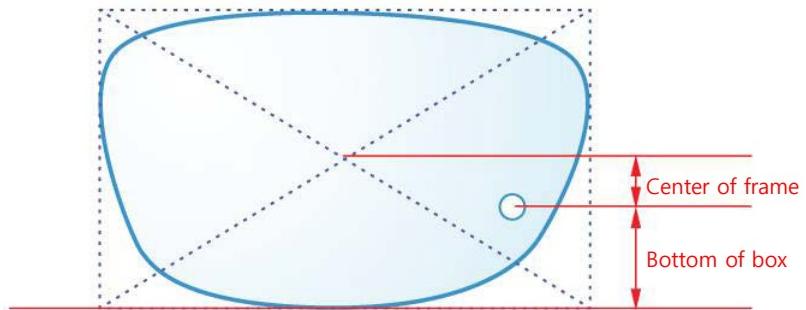
Based on the bottom of box (distance from the bottom of box)

**NOTE**

- Display options for X coordinate

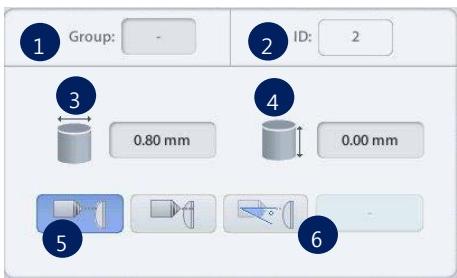


- Display options for Y coordinate

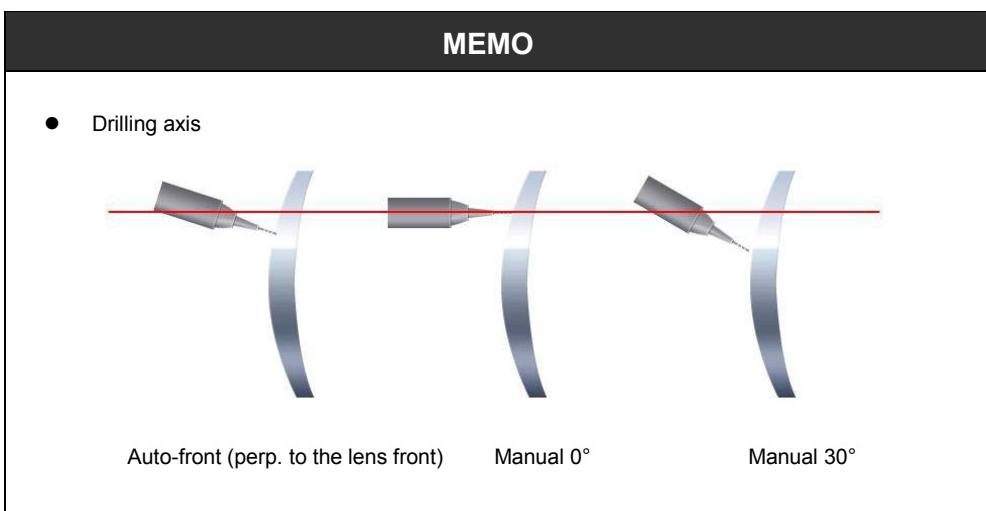


### 6.6.6. Property of Hole/Slot

It displays the properties of the selected hole / slot.



- ① Group: If selected hole / slot belongs to a group, it displays the group id. If selected hole / slot does not belong to a group, it displays with the '-'.
- ② ID: It displays the serial number of the hole / slot that is automatically granted.
- ③ Diameter: It displays the diameter of the selected hole / slot. (0.8 ~ 5.0 mm)
- ④ Depth: It displays the depth of the selected hole / slot. (0.0 ~ 6.0 mm). Depth 0.0 mm indicates the hole/slot that penetrates a lens.
- ⑤ Angle mode: You can choose the angle mode.
  - Auto (front): drill with the angle of perpendicular to the lens front
  - Auto (rear): drill with the angle of perpendicular to the lens rear
  - Manual: drill with the angle of user specified
- ⑥ Drilling angle: If you choose 'manual', you can set the drilling angle. (0° ~ 30°)

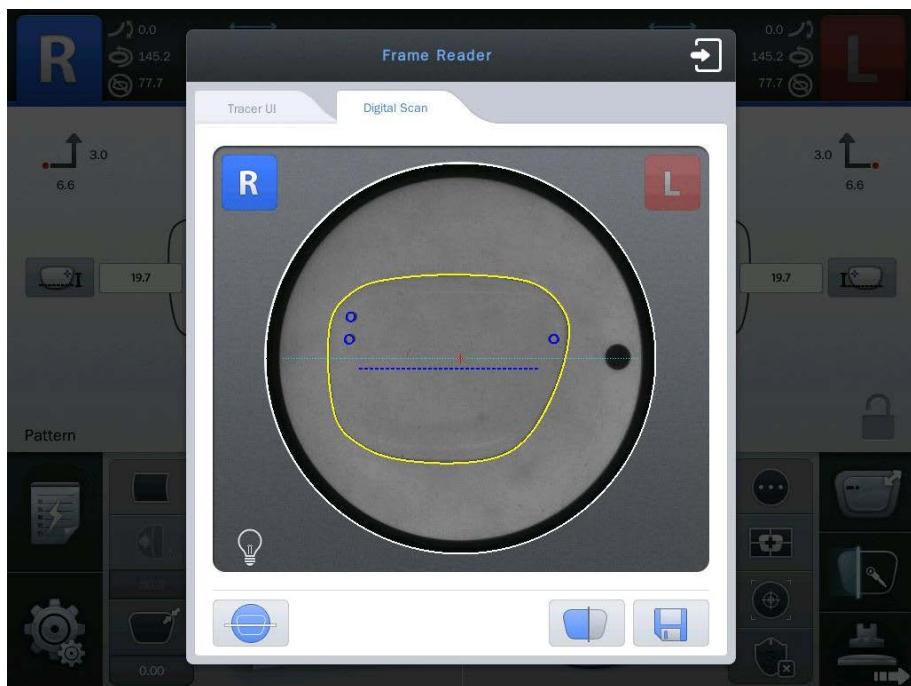


## 6.7. Digital Scan + Tracer UI

### 6.7.1. Digital Scan

This is for recognizing the frame/holes/slot/notch by scanning demo-lens.

To use digital scan, click the button  on the bottom right of the main screen, and then select the digital scan button on the upper left



- 1  ① Select right side.
- 2  ② Select left side.
- 3  ③ Adjust LED brightness manually.
- 4  ④ Set axis of demo-lens manually by dragging the two points. .
- 5  ⑤ Start Digital Scan.



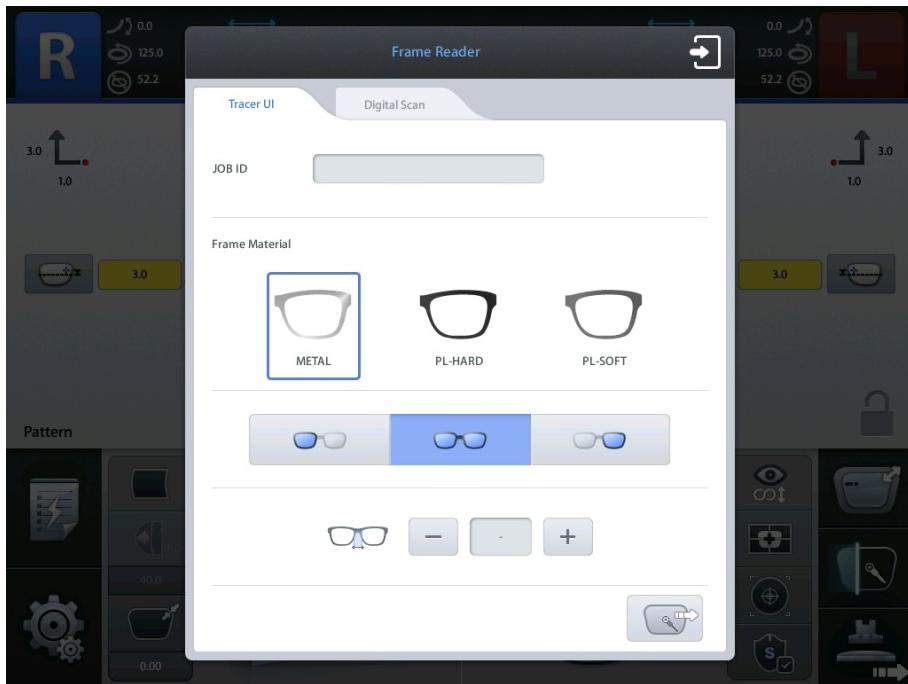
⑥ Save the Digital Scan result to Job Manager.

- ① Change to Digital Scan lens plate.
- ② Mark 3-dots or draw straight line for axis on the demo-lens. Then, place the lens on the plate.
- ③ Select side.
- ④ Press the start button for Digital Scan.
- ⑤ After Digital Scan is done successfully, frame shape is displayed in yellow color. Otherwise, the frame shape is displayed in red color.
- ⑥ Press the save button to send the scan result to Job Manager.

#### 6.7.2. Tracer UI (Frame)

This screen is for operating Tracer. It is possible to enter job number directly, so this function is used for barcode recognition on remote process environment.

To use the Tracer UI (Frame), press the button  on the bottom right of the main screen, and then select the Tracer UI button on the upper left.



**JOB ID**

- Touch the text window and enter a job number directly.

**Frame Material**

- ① Select metal frame.



- ② Select hard plastic.



- ③ Select soft plastic.

**Frame Reading Mode**

- ① Select both sides reading.



- ② Select right side reading.



- ③ Select left side reading.

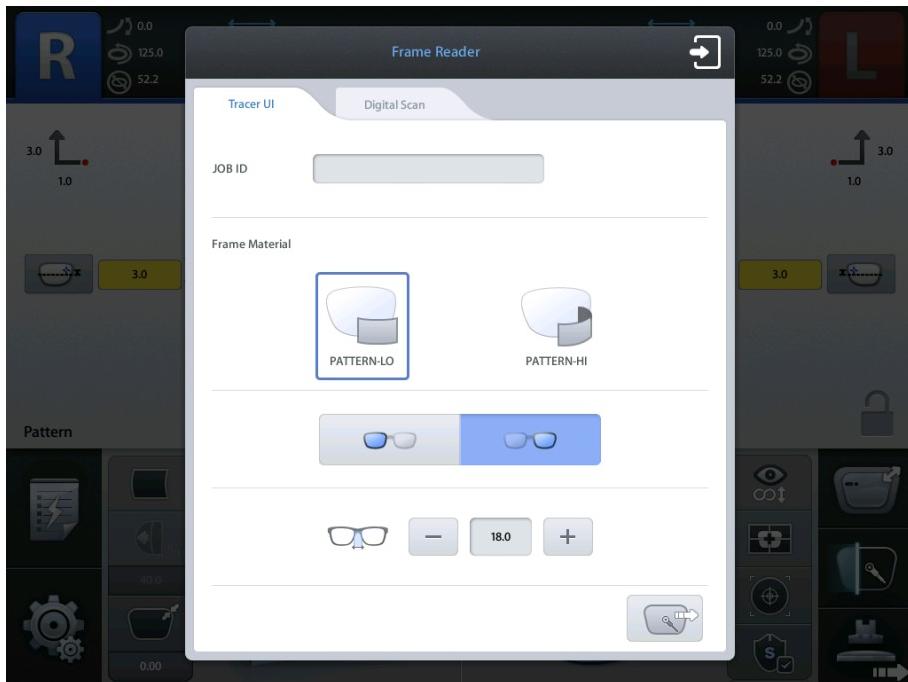
**Start**

- ① Start Tracing.

### 6.7.3. Tracer UI (Pattern)

To use the Tracer UI(Pattern), press the button  on the bottom right of the main screen, and then select the Tracer UI button on the upper left.

In addition, set up the pattern holder. Then following screen will pop up.



#### JOB ID

- Touch the text window and enter a job number directly.

#### Frame Material



- ① Select normal pattern.

- ② Select high-curvature pattern.

**Frame Reading Mode**

① Select right side reading.



② Select left side reading.

**Bridge Size and Start**

① Input bridge size value. Use  $-$ ,  $+$  buttons or text window.



② Start Tracing.

## 6.8 Job editor

Job editor provides the whole edging options at once, so it is useful for the skillful users.



- ① PD (Binocular PD, R/L Monocular PD)
- ② OH ( $\Delta Y$ , Box height, Mix height)
- ③ Bridge size (DBL), FPD
- ④ Frame curve(CIRC), Circumference(FCRV)
- ⑤ Frame Type
- ⑥ Blocking mode
- ⑦ Lens type (Bi-focal Round, Bi-focal flat, Normal)
- ⑧ Near vision area diameter
- ⑨ Lens type
- ⑩ Edging type
- ⑪ Bevel/Grooving position
- ⑫ Size
- ⑬ Polishing
- ⑭ Safety beveling(Front/Rear)
- ⑮ Safety mode

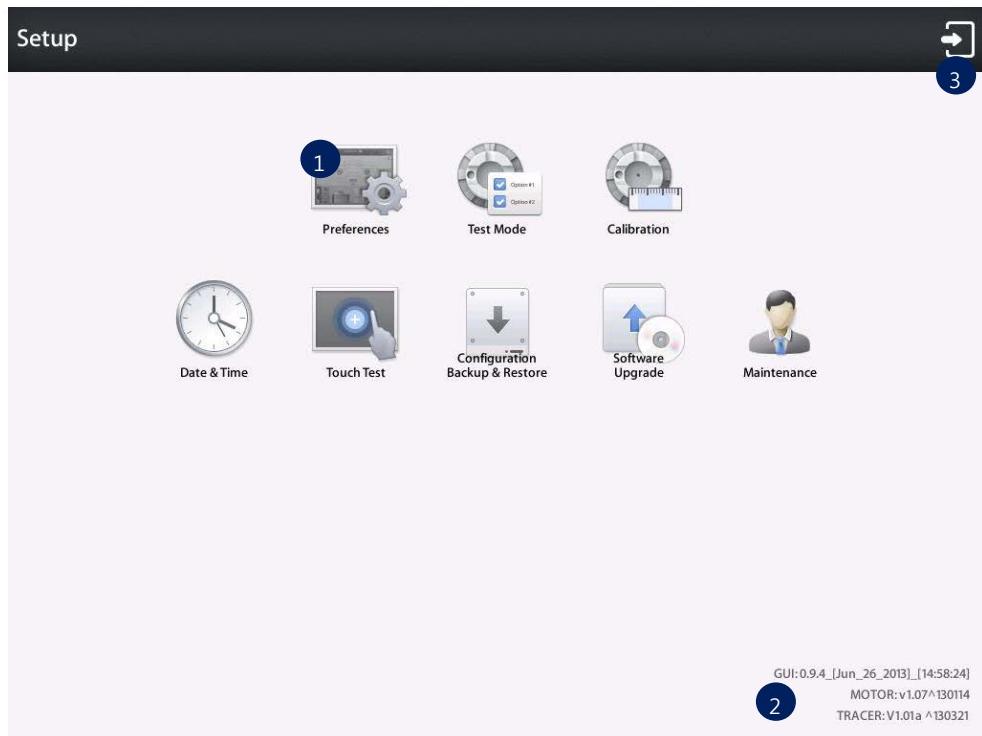
**NOTE**

The job editor options are applied to right/left both side concurrently. But if the options distinguish the two sides, those are applied only to the selected side.

## 7. Configuration

Press  button on the bottom left of the Main screen.

### MENU Screen



- ① Preference
- ② Installed Software version information
- ③ Exit

### NOTE

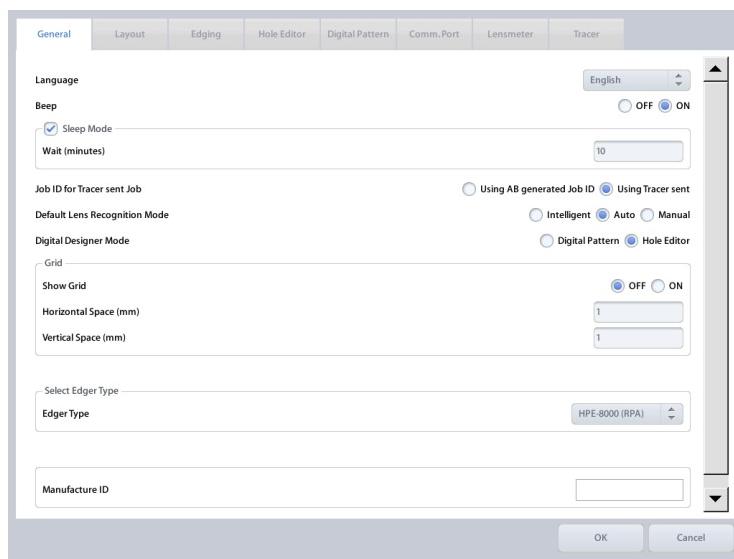
Refer to 'Chapter 8. System Maintenance' for the other functions.

## 7.1. Preference

User Interface can be customized to user's preference.

### 7.1.1. General

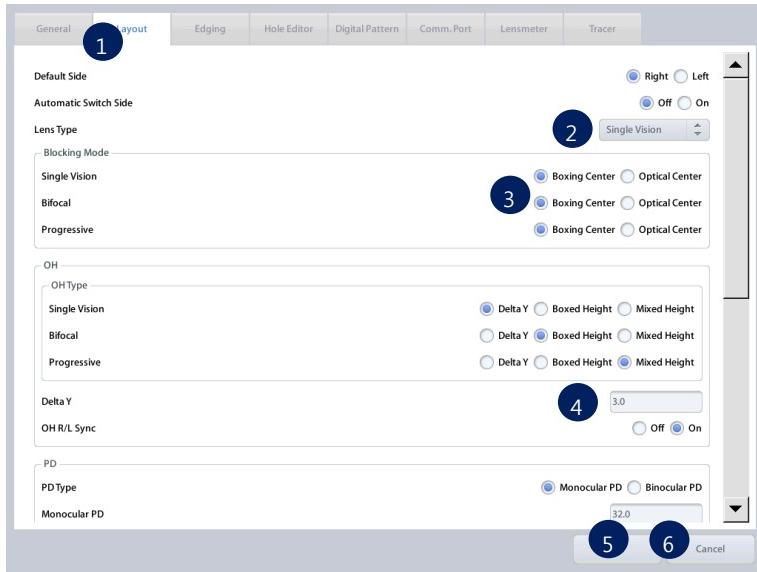
Default settings for User Interface option.



- Language – Sets default language
- Beep Sound – Turns on or off the beep sound
- Sleep Mode – Inputs sleep mode waiting time (minutes)
- Job ID for Tracer sent Job – Set ID for the Tracer set Job
  - Use ID generated by AB
  - Use ID sent by Tracer
- Default Lens Recognition Mode – Set default lens recognition mode
- Digital Designer Mode – Sets digital designer startup screen
- Grid – Shows or hides gridlines of main screen
- Select Edger Type – Select wheel type of the Edger connected to the Autoblocker
- Manufacture ID – Display machine ID

## NOTE

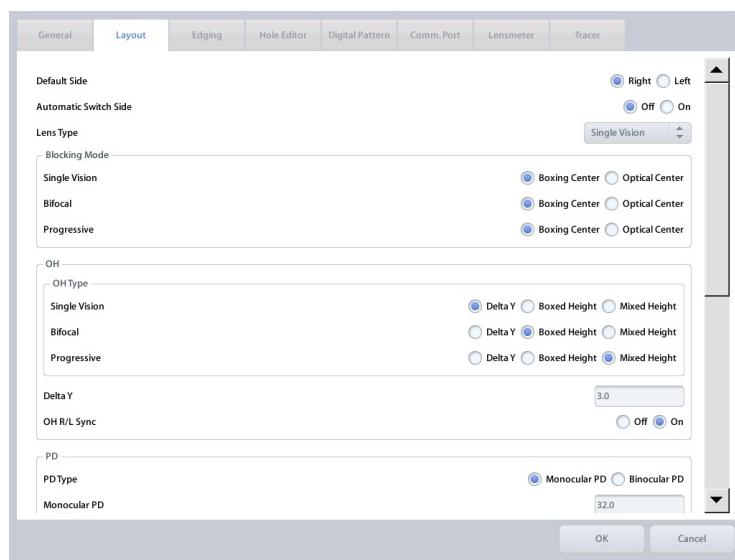
- Menu Form



- ① Tab Menu
- ② List Box Setting
- ③ Radio Button Setting
- ④ Value Setting
- ⑤ Save
- ⑥ Cancel

### 7.1.2. Layout

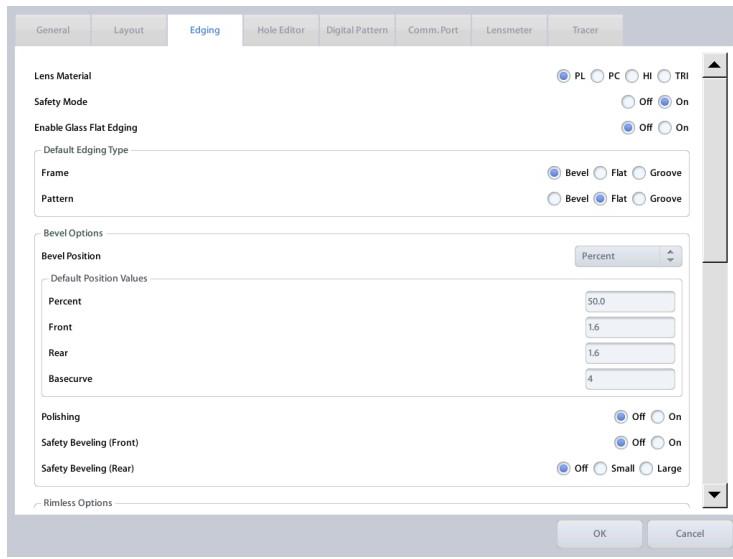
Default settings for Layout options.



- Default Side – Select the default side for a new job
- Automatic Switch Side – Set automatic change after blocking
- Lens Type – Select the default lens type for a new job
- Blocking Mode – Select the default blocking mode for a new job for each lens type
- OH – Set the default input style for the optical height and Delta Y according to the lens type.
- OH R/L Sync : Turn on or off the function of the R/L synchronization
- PD – Set default input style of PD and PD value (Monocular PD, Binocular PD and Bridge Size)
- Bifocal Lens – Set default value for Bifocal Lens (Vertical and Horizontal Offset and Near vision lens diameter)
- Manual Blocking – Set guide line for manual blocking
- Mandatory Field Warning – Check if mandatory values are inputted or not.
  - PD – Warning message pops up if PD value is not entered
  - OH – Warning message pops up if OH(Delta Y, Boxed Height or Mixed Height) value is not inputted
  - Bridge Size – Warning message pops up if Bridge size or FPD value is not inputted

### 7.1.3. Edging

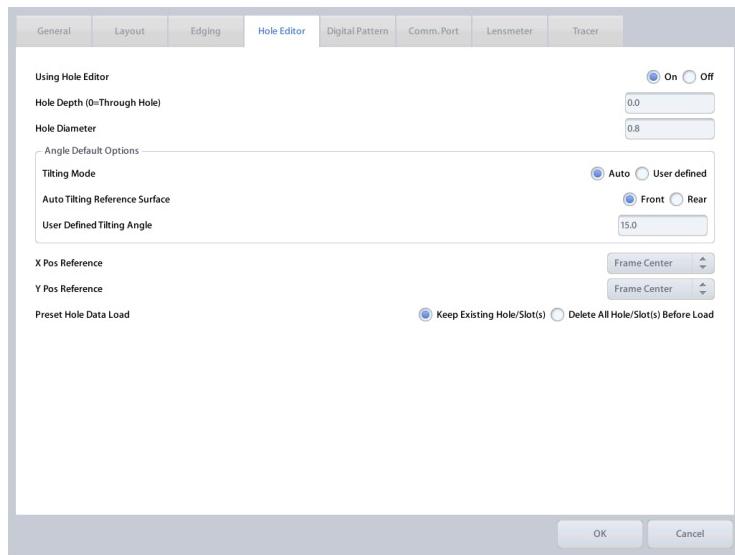
Default settings for Edging options.



- **Lens Material** – Set the default lens material
- **Safety Mode** – On or Off the Safety Mode
- **Enable Glass Flat Edging** – On or Off the flat edging for glass lens.
- **Default Edging Type** – Set the default Edging type for Frame and Pattern
- **Beveling Option** – Set the default setting of the Bevel
- **Rimless Options** – Set default values of Rimless
- **Asymmetric Bevel Default Value** - Set default values of Asymmetric Bevel
- **Mini Bevel Default Value** - Set default values of Mini Bevel
- **Semi-U Bevel Default Value** - Set default values of Semi-U Bevel

#### 7.1.4. Hole Editor

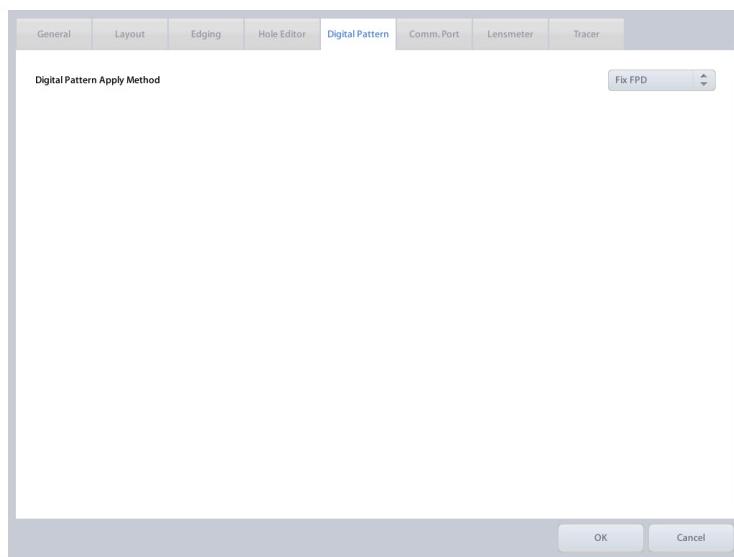
Default settings for Hole Editor options.



- Use Hole Editor – Hole Editor On/Off
- Hole Depth – Set default hole/slot depth value
- Hole Diameter – Set default hole/slot diameter value
- Angle Default Options – Set default tilting angle mode and manual tilting value
- X Pos Reference – Set default horizontal coordinate reference
- Y Pos Reference – Set default vertical coordinate reference
- Preset Hole Data Load – Set default behavior of preset loading

### 7.1.5. Digital Pattern

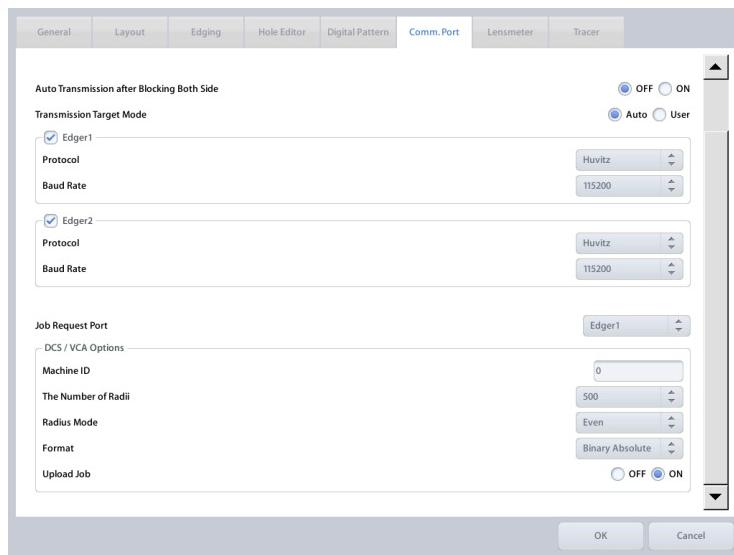
Default Settings for Digital Pattern options.



- Digital Pattern Apply Method
  - Fix FPD – Change the frame pattern and recalculate the Bridge Size based on fixed FPD.
  - Fix Bridge Size – Change the frame pattern and recalculate FPD based on fixed Bridge Size.

### 7.1.6. Communication Port

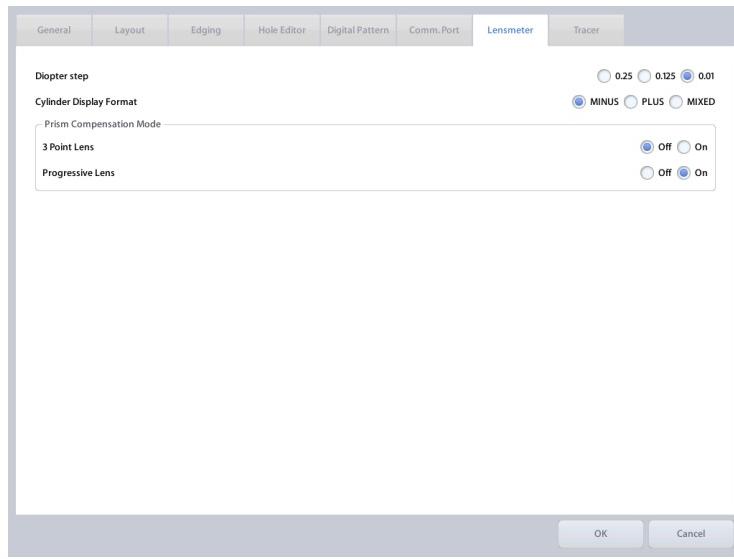
Default settings for communication options.



- Auto Transmission after Blocking Both Side – On or Off the auto transmission after blocking both side
- Transmission Target Mode – Select the mode if autoblocker uses two edger ports.
  - Auto mode - Transmit job to both edgers.
  - User mode - Transmit job to the selected edger.
- Edger1 – Use Edger1 port
  - Protocol – Set communication protocol
  - Baud Rate – Set communication speed
- Edger2 – Use Edger2 port
  - Protocol – Set communication protocol
  - Baud Rate – Set communication speed
- Job Request Port – Set communication port for job downloading
- DCS / VCA options – Set communication options for LMS
  - Machine ID – Set machine ID
  - The Number of Radii – Set the number of radii
  - Radius Mode – Set angle type
  - Format – Set data format
  - Packet Timeout – Set packet timeout
  - Confirm Timeout – Set confirmation timeout
  - Upload Job – Set Enable/Disable Upload Job function to Host PC

### 7.1.7. Lensmeter

Default Settings for Lensmeter options.



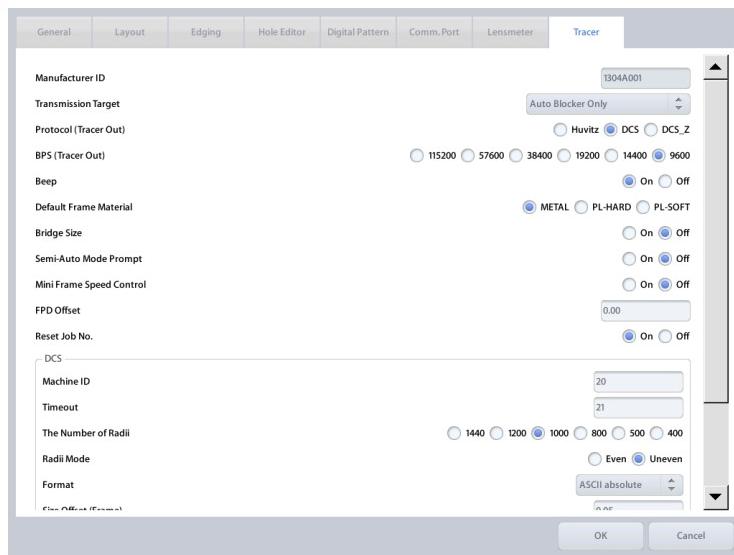
- Diopter Step – Set unit step of lens power
- Cylinder Display Format – Set display format of cylindrical sign
- Prism Compensation Mode - Set Prism Compensation mode

#### NOTE

When blocking 3-dot lens or progressive lens, 3-dot, horizontal line and boxing center on the lens surface are used. In this case, refractive index of the lens may result in distorted information. Prism Compensation Mode compensates the distortion for accurate blocking.

### 7.1.8. Tracer

Default Settings for Tracer options.



- Manufacturer ID – Set machine ID
- Transmission Target – Set transmission target
- Protocol (Tracer Out) – Set communication protocol
- Baud rate (Tracer Out) – Set communication speed
- Beep – Beep on/off
- Default Frame Material – Set default frame material
- Bridge Size – Sending Bridge Size On/Off
- Semi-Auto Mode Prompt – Check location of stylus tip in the Semi-Auto Mode On/Off
- Mini Frame Speed Control – Mini Frame Reading Speed Slow down On/Off
- FPD Offset – Set FPD offset
- Reset Job No. – Initialize job number of tracer
- DCS / VCA options – Set communication options for LMS
  - Machine ID – Set machine ID
  - Timeout – Set packet timeout
  - The Number of Radii – Set the number of radii
  - Radius Mode – Set angle type
  - Format – Set data format
  - Size Offset (Frame) – Adjustment size for Frame
  - Size Offset (Pattern) – Adjustment size for Pattern
  - Mirroring – Mirroring On/Off
  - Transmit Frame Material – Set default frame material

## 8. System Maintenance

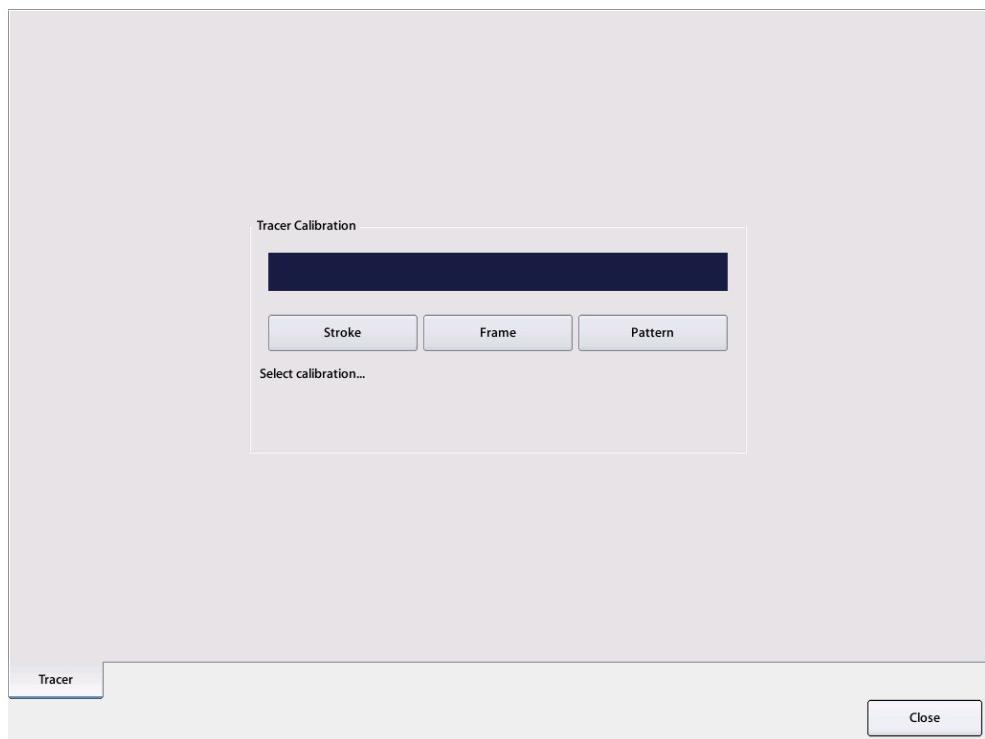
### 8.1. Automatic Calibration of Frame Reader

Automatic Calibration of Frame Reader is required with the following cases,

- When the Size or Axis value of the traced data seems to have a problem,
- When the Frame Reader seems to have a problem in operating normally.

Automatic calibration of frame reader consists of three parts: Stroke, Frame, Pattern. If any changes in Stylus occur, Stroke calibration must be executed at first. The order of calibration is like this : Stroke → Frame → Pattern.

The calibration for frame reader starts with screen as below by pressing the calibration button on the menu

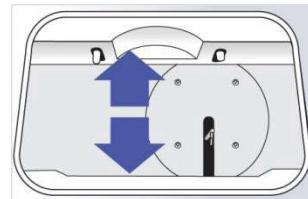


### 8.1.1. Stroke Calibration

Procedures for stroke calibration

- ① Press MENU button and select CALIB.
- ② Press FRAME button and select STROKE.
- ③ Press BOTH button.
- ④ Pull the Gripping bars to the maximum.
- ⑤ Press BOTH button to start calibration.

Next, follow the instructions displayed.

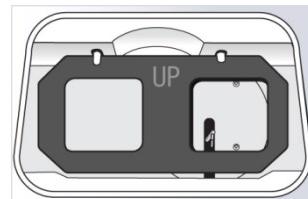


### 8.1.2. Frame Calibration

Procedures for frame calibration

- ① Press MENU button and select CALIB.
- ② Press FRAME button and select FRAME.
- ③ Press BOTH button.
- ④ Load the Standard Frame.
- ⑤ Press BOTH button to start calibration.

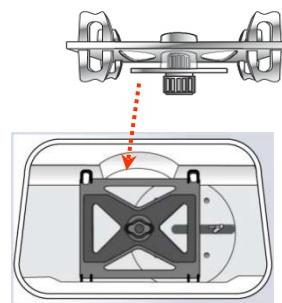
Next, follow the instructions displayed.



### 8.1.3. Pattern Calibration

Procedures for pattern calibration

- ① Press MENU button and select CALIB.
- ② Press FRAME button and select PATTERN.
- ③ Press BOTH button.
- ④ Load the Standard Pattern.
- ⑤ Press BOTH button to start calibration.



Next, follow the instructions displayed.

#### NOTE

- The result of Automatic Calibration is automatically saved.
- Be sure to check the related information before executing the calibration work because you cannot return to the previous state
- Press STOP button to stop processing during the calibration.

## 8.2. Save Image

When the auto blocker cannot detect optical center because of marking recognition failure or the digital scan quality is low, you can save the image file to SD card and request improvement.

### When the auto blocker failed in detecting optical center

When the auto blocker cannot detect optical center because of marking recognition failure, you can save the image file to SD card. SD card must be inserted in slot.



- ① When auto blocker cannot detect optical center in blocking mode, a message that requests to check the lens will pop up.
- ② If you press the 'Save Image' button on this message, still image is saved in SD card.

**Save still image in blocking mode**

You can save the still image even when the autoblocker has detected the optical center successfully.

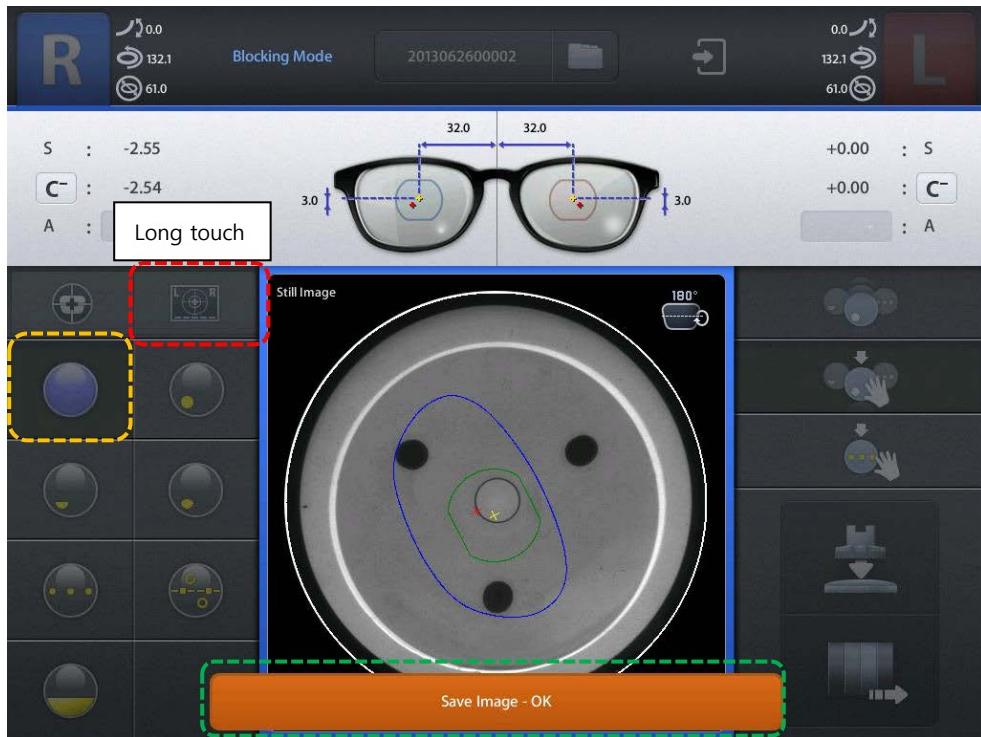
In this case, SD card must be inserted in slot.



- ① Press one of the lens type buttons for a long time, then "Holding Down the Button" message will pop up.
- ② At this moment, release the button, then the still image is saved in SD card.

**Save the lensmeter image**

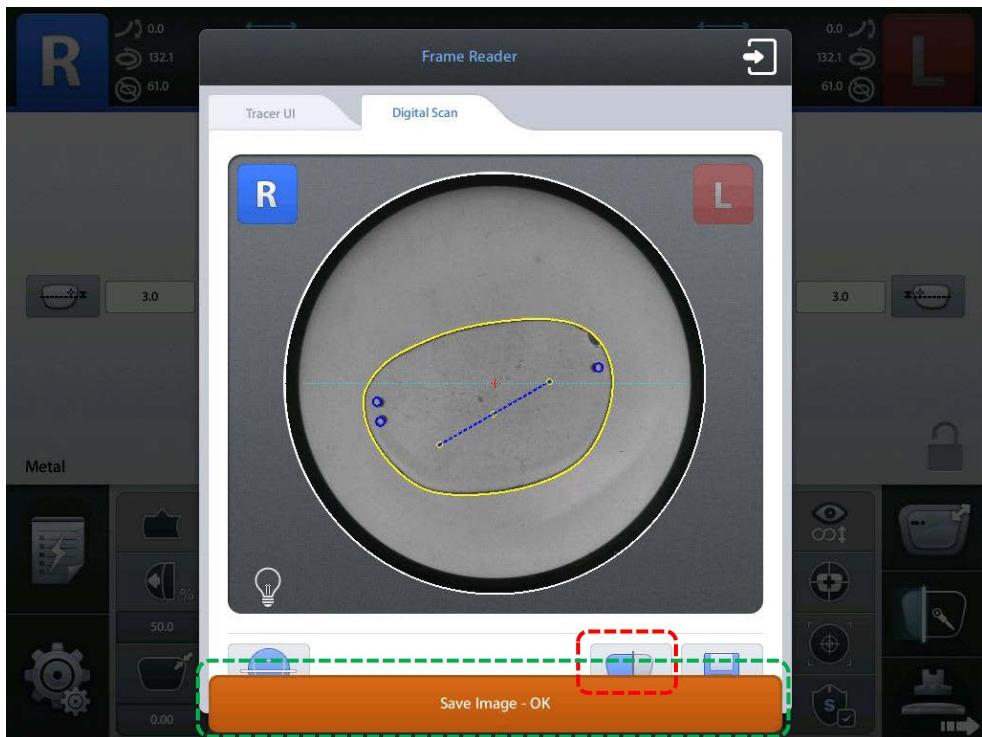
When lensmeter measuring, if the auto blocker cannot detect the optical center because of dust or markings on lens, you can save the lensmeter image. In this case, SD card must be inserted in slot.



- ① Set lens type to Normal and press the lensmeter button for a long time, then "Holding Down the Button" message will be displayed.
- ② At this moment, release the button, then the still image is saved in SD card.

**Save Digital Scan Image**

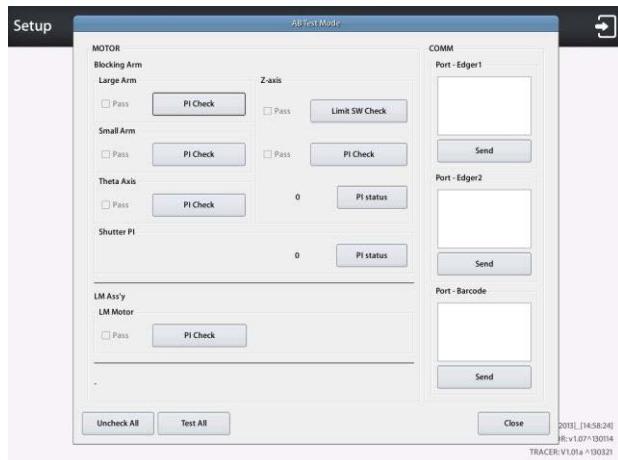
During digital scan, you can save digital scan image if you want. In this case, SD card must be inserted in slot



- ① Please press the scan button on digital scan window for a long time, then "Holding Down the Button" message will be displayed.
- ② At this moment, release the button, then the still image is saved in SD card

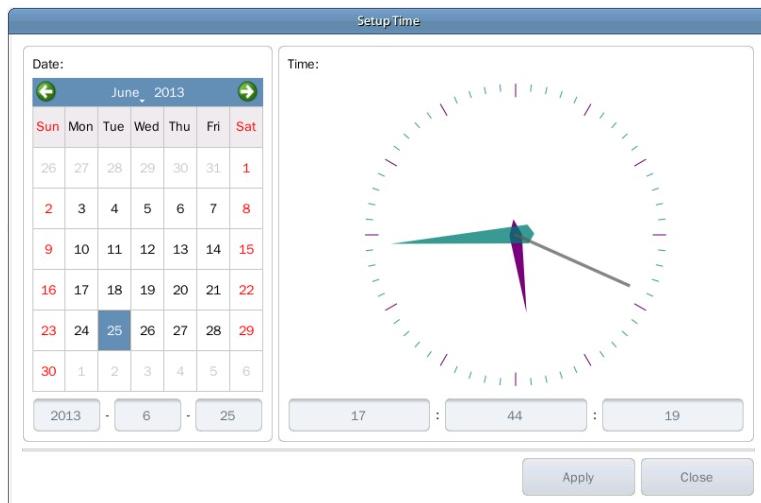
### 8.3. Test Mode

You can test Blocking arm, PI, Limit switch, lensmeter, Motor PI, COMM.



### 8.4. Date & Time

Please set the date and time first after you install this machine.



### 8.5. Touch Test

You can check the normal operation of the touch screen

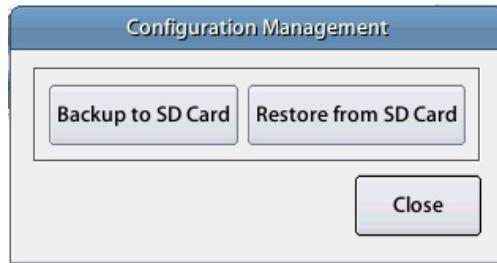
#### NOTE

You must use the emergency touch screen test function of the touch test is not possible.

- ① Please find out the Function button at the rear side of the autoblocker.
- ② If you press the Function button shortly, touch test screen will pop up. If you press the button for more than a second, touch calibration screen will pop up.

## 8.6. Configuration Management

You can backup or restore system configuration data.



- ① Backup to SD Card – Backup the configuration data to SD card.
- ② Restore from SD Card – Restore the configuration data from SD card

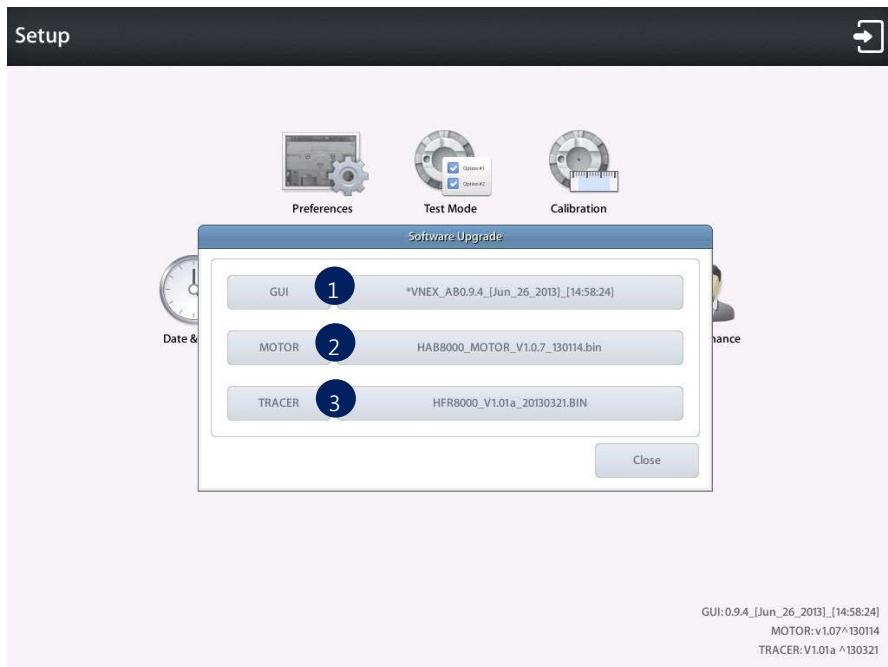
### NOTE

- Configuration Management function is available when SD card inserted.
- You can back up the configuration data whenever you need, because you can name the files.

## 8.7. S/W Upgrade

You can upgrade software.

HAB-8000 consists of three kinds of software. GUI software handles user input, MOTOR software controls blocking arm and frame reader control software.



- ① GUI – Upgrade GUI software
- ② MOTOR – Upgrade MOTOR software.
- ③ TRACER – Upgrade TRACER software

**NOTE**

- It is highly recommended to use latest software.
- Software version is displayed on the menu screen.
- How to upgrade GUI software
  - ① Copy upgrade file to SD card and insert SD card into the system.
  - ② Check the SW version displayed on the upgrade dialog box
  - ③ Press the GUI button to start upgrade.
  - ④ GUI upgrading process takes about 10 ~ 20 seconds.
  - ⑤ After upgrading process finishes, restart the system.
  - ⑥ If the system rebooted, new software will be launched.
- How to upgrade MOTOR software
  - ① Copy upgrade file to SD card and insert SD card into the system.
  - ② Check the SW version displayed on the upgrade dialog box.
  - ③ Press the MOTOR button to start upgrade.
  - ④ MOTOR upgrading process takes about 2~3 minutes.
  - ⑤ After completing the upgrade, please restart the system. Then new software is applied.
- How to upgrade TRACER software
  - ① Copy upgrade file to SD card and insert SD card into the system.
  - ② Check the SW version displayed on the upgrade dialog box
  - ③ Press the TRACER button to start upgrade.
  - ④ TRACER upgrading process takes about 2 ~ 3 minutes.
  - ⑤ After completing the upgrade, please restart the system. Then new software is applied.

## 8.8. Maintenance Code

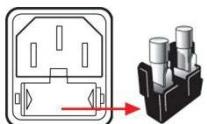
Maintenance code is used for the engineer to diagnose the system.



## 8.9. Maintenance Tips

### 8.9.1. Fuse Replacement

Be sure to check the Fuse Specification is 250V 3.15A. Fuse box is located below the power plug at the rear side of the auto blocker.



#### WARNING

Be sure to use the appropriate Fuse. Otherwise it may damage the product or cause fire

### 8.9.2. Regular Maintenance

It is recommended to keep the regular maintenance cycle in order to maintain the Edging Performance. Be sure to carry out the regular maintenance by the service technician of HUVITZ or the technician authorized by HUVITZ.

### 8.9.3. Cleaning

- ① Sweep the outer surface and LCD panel with soft fabric material.
- ② When you do not use this device, wrap it with dust cover.

## 9. Troubleshooting Guide

If you happen to have any problem, please check the following lists and take action as provided. If you cannot solve it, please contact HUVITZ.

Problem	Cause	Solution
When blocking, Lens is dragged out.	Leap block is caught in blocking arm too tightly	<ul style="list-style-type: none"> <li>① Release the ball plunger a little bit so that the block falls out smoothly.</li> <li>② When blocking the high-curve lens, use small leap block instead of long leap block.</li> </ul>
When blocking, the leap block is not attached to the lens	<ul style="list-style-type: none"> <li>① Adhesive strength has been weakened because the leap tape is reused.</li> <li>② Ball plunger is too tighten.</li> <li>③ When blocking a high-curve lens to box center, leap block is partially attached to the lens.</li> </ul>	<ul style="list-style-type: none"> <li>① Do not re-use the leap tape. (If you re-use it, dry off the leap tape sufficiently by using heater)</li> <li>② Release the ball plunger a little bit so that the block falls out smoothly.</li> <li>③ When blocking the high-curve lens, use small leap block instead of long leap block.</li> </ul>
A message says it is out of the blocking area.	<ul style="list-style-type: none"> <li>① The blocking position is far away from the center of blocking screen.</li> <li>② The box center is far away from the optical center.</li> <li>③ Lens is located lopsidedly.</li> </ul>	Move lens so that the blocking position is located in the square guide line displayed on the screen.

## 10. Specifications and Accessories

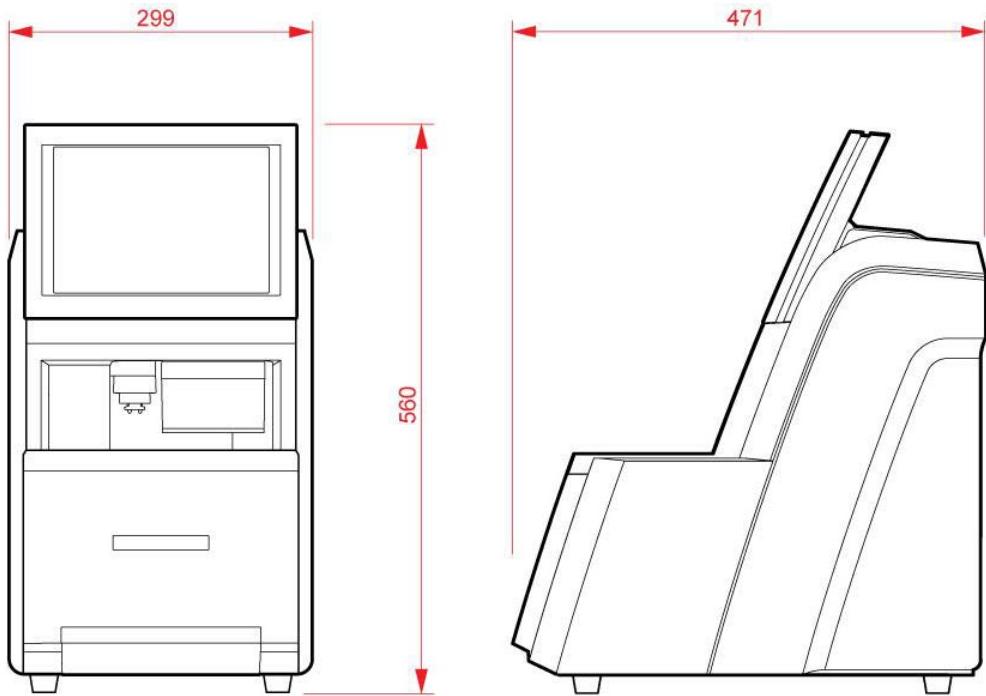
### 10.1. Standard Accessories

User's Manual .....	1
Lens Supporter .....	1
Lens Supporter for Frame Change .....	1
Lens Supporter for Digital Scanning .....	1
Standard Frame (for Frame Reader Calibration) .....	1
Standard Pattern (for Frame Reader Calibration) .....	1
Pattern Holder .....	1
Touch Pen .....	1

## 10.2. Specifications

Tracing Type	Automatic 3D Binocular Tracing
Tracing Mode	Auto, Semi-Auto
Tracing Size	Frame ø16.0 ~ 92.0mm, Pattern ø16.0 ~ 84.0mm
Frame Material	Metal, Hard Plastic, Soft Plastic
Data Processing	FPD, Frame Curve, Circumference, 3D Angle, Concave Shape
Lensmeter Camera	CMOS B/W 1.3M
Imaging Camera	CMOS B/W 1.3M 2x Image
Measurement	SPH : -10D ~ +10D, CYL : ±6D
Increment	0.01D, 0.125D, 0.25D
Blocking Tolerance	-0.5 ~ +0.5mm
Axis Tolerance	±1°
Blocking Method	Automatic Blocking with Mechanical Arm
Blocking Pressure	3kgf
Lens Recognition Mode	Intelligent, Auto, Manual
Lens Type Recognition	Single, Bi-focal, Progressive, 3-dot
Display	10.4inch Color TFT LCD (1024x768) with Touch Screen
Dimensions	300(W) x 470(D) x 560(H)
Weight	23Kg
Power Supply	AC 100~240V 50/60Hz
Power Consumption	75W

### 10.3. Drawings of System



## 11. SERVICE INFORMATION

If the instrument appears malfunctioning, it is highly recommended to check the instrument according to the troubleshooting procedure in chapter 9 of this manual.

If any problem persists or the instrument is damaged or malfunctioning, please follow the steps below.

- Please contact the local distributor in your province or country at first.
- Before calling to the local distributor, please be sure to check Model and Serial Numbers.
- The serial number is unique to this unit and found on the back of the unit. It is recommended to fill up the following table as soon as you purchase our product.
- Please keep this manual as a permanent record of your purchase and keep your purchase receipt as your proof of purchase.

**Date of Purchase:** \_\_\_\_\_

**Dealer's Name:** \_\_\_\_\_

**Dealer Address:** \_\_\_\_\_

**Dealer Phone No. :** \_\_\_\_\_

**Model No.:** \_\_\_\_\_

**Serial No.:** \_\_\_\_\_

- If you can't contact with your local distributor, you can directly get in touch with the service department of the HUVITZ using the phone number and the address written in the below table.

### How to Contact HUVITZ Co., Ltd

HUVITZ Co., Ltd.(Headquarter)  
298-29 Gongdan-ro  
Gunpo-si Gyeonggi-do,  
(435-862), Republic of Korea

Tel: +82-31-428-9100  
Fax: +82-31-477-9022(C/S)  
e-mail: svc@huvitz.com  
<http://www.huvitz.com>

(Factory)  
16-17, LS-ro 91beon-gil, Dongan-gu,  
Anyang-si, Gyeonggi-do  
(431-848), Republic of Korea

Tel: 031-428-9100  
Fax: 031-477-8618